



PPAF Microcredit Financing: Assessment of Outcomes 2009



by
GALLUP Pakistan

Pakistan Poverty Alleviation Fund

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Foreword

The first national level study to assess outcomes of PPAF microcredit was carried out in 2002 as an externally commissioned, third party exercise covering 1800 (control and treatment) households fully representative of PPAF portfolio in terms of geographic locations, partner organizations, borrowers and their economic activities. A second study featuring 3,000 households nationwide was undertaken in 2005, followed by a third that covered 4,000 households in 2009. These three studies are one of the most extensive undertaken to date, in Pakistan, in terms of depth and coverage.

Following a consistent methodology, seventeen major hypotheses were tested in order to ascertain welfare effects of microcredit borrowing. I am sure that this study will be very useful to stakeholders interested in understanding the dynamics of microcredit interventions, both at individual and at household level. The study also indicates several areas where there is room for further thought and improvement.

I would like to acknowledge Ahmad Jamal and his team for the time and interest they have given in the preparation and conduct of this study. My special thanks to the partner organizations and the communities for their input and time, without whom this study would not have achieved its objectives.

Kamal Hyat

Chief Executive/Managing Director

I - Overall Assessment

“According to our research, there is adequate evidence to suggest that on average, low income households that borrowed from PPAF are better off today than they would have been if they had not borrowed. This observation was initially made for the first group of borrowers surveyed in 2002 and has been found to be equally true for the second, third and comparatively larger pool of borrowers surveyed in 2009.

There is overall improvement in the income as well as personal and business assets of PPAF borrowers. Social status, particularly of the women borrowers, has undergone a positive change. Admittedly the scale of change is limited, as is the scope and amount of the loan. However the direction of change is, on the whole, positive. Our research shows that the benefits of PPAF loans appear in terms of poverty alleviation and improvement in the basic lifestyle indicators of the borrower. The direct impact on generating employment or the effect on other development indicators is not very significant. However, improvement in the basic lifestyle indicators of microcredit borrowers can possibly have a second order positive effect on development indicators.”

Gallup, Pakistan

II - Overview of Study

Background

This report consists of findings, analysis and evaluations based on the follow-on study commissioned subsequent to the initial exercises conducted by Gallup Pakistan in 2002 and 2005. Its purpose is to assess preliminary outcomes (at the end user level) of microcredit extended by Pakistan Poverty Alleviation Fund through its partner organizations

This document is not an academic paper, but a survey report meant for quick and timely policy input. It identifies certain key variables, clearly spelled out hypotheses and tests them on the basis of data gathered from a representative set of households from all across Pakistan. It also recognizes that outcome assessment is a complex and complicated exercise especially with respect to causality and attribution. Yet there are measurable indicators that provide reasonably valid insight into the change (or its absence) in the life of the households that are being studied.

Methodology

The study aimed at measuring change in the economic condition and social status of borrowers in comparison to non-borrowers and comprises of two main components - the core portion is based on analytical tests and results emanating are supported robustly by empirical data. Methodology followed for this section combines the 'with-without' approach and the 'before-after' approach. Investigation was conducted while categorizing the total sample into two specific groups i.e. control and treatment.

The treatment group consisted of persons who had directly secured microcredit loans. Control group persons are in a well-defined comparable situation however they were not beneficiaries of any loans. The data for both groups has been collected for the loan year (between January 2004-December 2007) and previous year (January 2003-December 2006); thus the difference between them in one year is the program's impact. The second section consists of findings that are not empirically tested but based on the perception of the borrower group, including their opinion regarding loan size, repeat borrowing and impact of loan on their social status.

A sample size of more than 4,200 persons was selected in 31 districts, of which 2,100 were borrowers and 2,100 were non-borrowers. As

both males and females are eligible for lending, gender selection for the sample was made to reflect the PPAF portfolio split between male and female borrowers in each district. The selection of treatment group was carried under the strict condition that the selected client should have taken at least one loan during the period January 2004 and December 2007. The multistage sampling procedure was adopted in order to ensure that no biases prevail in the study. The construction of control group was done using a propensity score sheet including indicators on household income, age of respondent, number of household members and education of the respondent. Both groups were then matched for these indicators and only those who precisely had same characteristics as borrowers were chosen. Both groups were then asked detailed questions about their incomes, assets, consumption, household repair and business & personal life practices for current and previous years. The difference between these two periods, for both groups, was then statistically compared and any significant difference (at 90-95% level of confidence) was attributed to PPAF's microcredit facility. The entire data was computer processed and analyzed using SPSS and the enumerators' team was supervised by a panel of senior research and policy analysts.

Seventeen major hypotheses were tested to ascertain improvement or deterioration in welfare of recipients. Data collected in the course of our study suggest that while a number of these hypotheses are validated (fully or partially). Others may not hold, or may alternatively require qualification or explanation.

Major Findings

The study concludes that participation in PPAF's microcredit facility leads to:

- Increase in total household income, total personal income of the borrower and income from the sector in which the loan has been used;
- Increase in return on investment;
- Increase in clients' ability to consume through enhanced spending on consumption;
- Increase in household possession of consumer durables and productive assets;
- Improvement in clients business and personal life-style as it enables them to spend more on non-consumption expenditures;
- Positive impact on their social status and improve their control over household resources, especially for women;
- Positive opinion about lending and repeat borrowing.

III - Hypotheses

1. Change in Personal Income

Hypotheses: Participation in microcredit leads to increase in personal income.

- A. In the time period during which the study was conducted, data were extracted regarding the changes in income of both respondent groups i.e. borrowers and non-borrowers. It was noted that 61% of those who had borrowed in contrast to 57% of the non-borrowers experienced a positive changes in income. The ratio of borrowers experiencing a positive changes in their personal income is significantly higher than that of non-borrowers at 95% level of confidence.
- B. Increase in the average personal income of the borrower group (20%) between previous and current year is proportionally higher than non-borrower group (15%) with significantly higher difference at 95 % confidence level.

Thus data confirm for both categories (A & B) that the hypothesis is held as a statistical difference is significant for borrower group.

Hypothesis is: held not held partially held

2. Change in Household Income

Hypothesis: Participation in microcredit leads to increase in household income.

- A. In the time period during which the study was conducted data were extracted regarding the changes in household incomes of both the borrowers and non-borrowers. It was noted that 82% of those who had borrowed in contrast to 73% of the non-borrowers experienced positive changes in their income. The ratio of borrowers experiencing positive change in their household income is significantly higher than that of non-borrowers at 95% level of confidence.

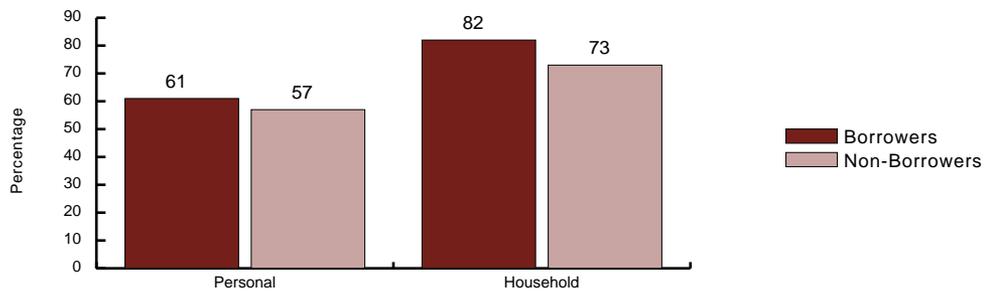


B. Increase in the average income of the borrower group (16%) is proportionally higher than the non-borrower group (12%) at 95 % level.

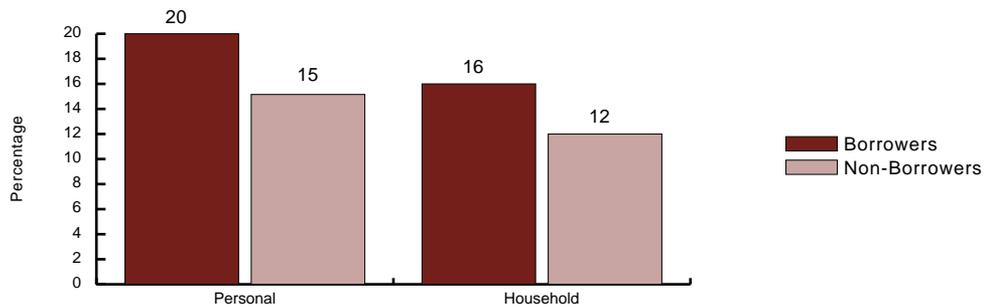
Thus data confirm for both categories (A & B) that the hypothesis is held as a statistical difference is significant for borrower group.

Hypothesis is: held not held partially held

(A)
Percentage of respondents experienced positive change in Income
Comparative Analysis of Client Group and Control Group



(B)
Change in mean income
Comparative Analysis of Client Group and Control Group



3. Change in Sector-wise Income

Hypothesis: Participation in microcredit leads to increase net annual income (inclusive of the imputed value of own production, which was used by household) from three key sectors.

Agriculture

- A. In the time period during which the study was conducted it was noted that amongst agro-related respondents, 83% of those who had borrowed in contrast to 85% of the non-borrowers experienced a positive changes in both their gross annual monetary and non-monetary income from agriculture. The ratio of borrowers experiencing positive change is significantly higher than that of non-borrowers (at 95% level of confidence).
- B. Increase in the average income from agriculture (inclusive of the imputed value of own production, which was used within the household) of both groups was equal (20%) and the difference between the two means was found to be statistically insignificant at both 95% and 90% confidence levels

Livestock

- A. In the time period during which the study was conducted it was noted that amongst livestock related respondents 80% of those who had borrowed in contrast to 76% of the non-borrowers experienced positive changes in their gross annual monetary as well as non-monetary income from agriculture. The ratio of borrowers experiencing positive change is significantly higher than that of non-borrowers at 90 % level of confidence.
- B. Increase in the average income from livestock (inclusive of the imputed value of own production, which was used within the household) of the borrower group (25%) was observed to be proportionally higher than the non-borrower group (17%) at 90 % level of confidence.

Enterprise

- A. In the time period during which the study was conducted it was noted that amongst those related with enterprise, 85% of those who had borrowed as opposed to 82% of the non-borrowers experienced positive

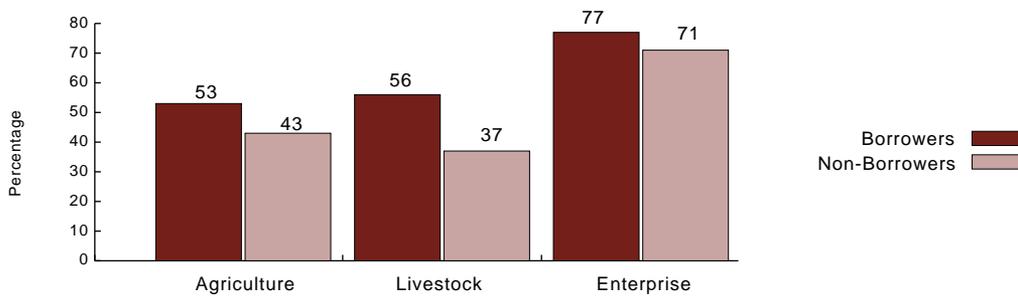


changes in their gross annual monetary as well as non-monetary income from enterprise/commerce. The ratio of borrowers experiencing positive change is significantly higher than that of non-borrowers at 95% level of significance.

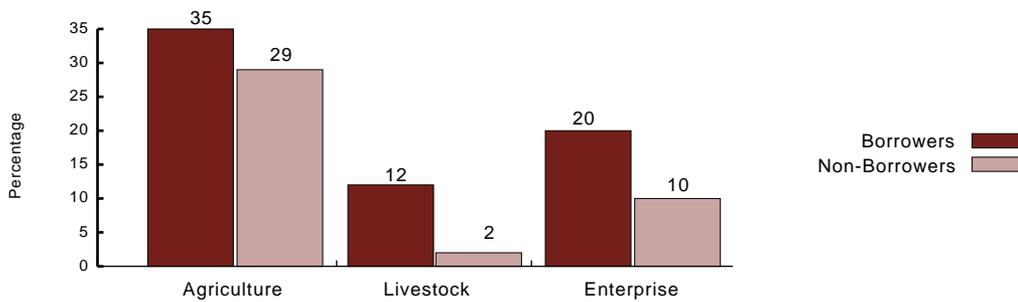
- B. Increase in the average income from enterprise/commerce (inclusive of the imputed value of own production, which was used within the household) of the borrower group (20%) was observed to be proportionally higher than the non-borrower group (15%) at 95 % level of significance.

Hypothesis is: held not held partially held

(A)
Percentage of respondents experienced positive change in Annual Income
Comparative Analysis of Client Group and Control Group



(B)
Change in mean income
Comparative Analysis of Client Group and Control Group



4. Change in Household Consumption

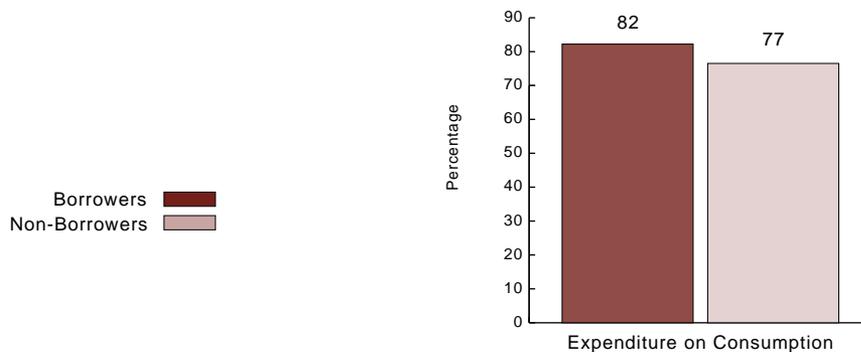
Hypothesis: Participation in microcredit leads to increase in consumption of household.

- A. It was noted that 82% of those who had borrowed in contrast to 77% of the non-borrowers experienced positive changes in their overall consumption expenditure. The ratio of borrowers experiencing a positive change in this variable is significantly higher than that of non-borrowers at 95% level of confidence.
- B. Increase in the average income of the borrower group (16%) is proportionally higher than the non-borrower group (14%) but the significant difference between them is not present.

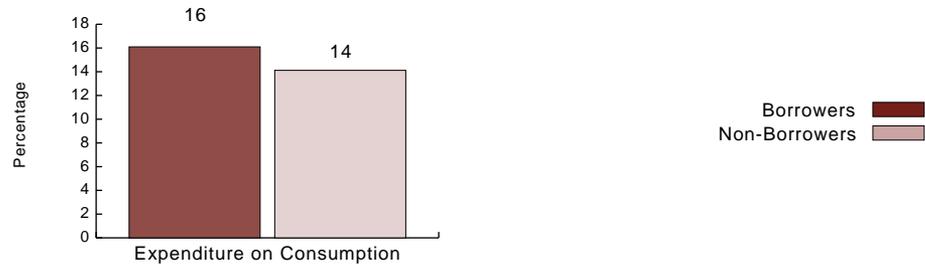
Thus data confirms for both categories (A & B) that the hypothesis is held as a statistical difference is significant for borrower group.

Hypothesis is: held not held partially held

(A)
Percentage of respondents experienced positive change in Expenditure over Consumption - Comparative Analysis of Client Group and Control Group



(B)
 Change in Mean Expenditure on Consumption
 Comparative Analysis of Client Group and Control Group



5. Change in Food Consumption

Hypothesis: Participation in microcredit leads to increase in consumption of overall food.

The data obtained suggest that the change in average expenditure on overall food items for both borrowers and non-borrowers is 20% and 18% respectively. However, the difference is so insignificant that it can be accounted for by a statistical error.

Hypothesis is: held not held partially held

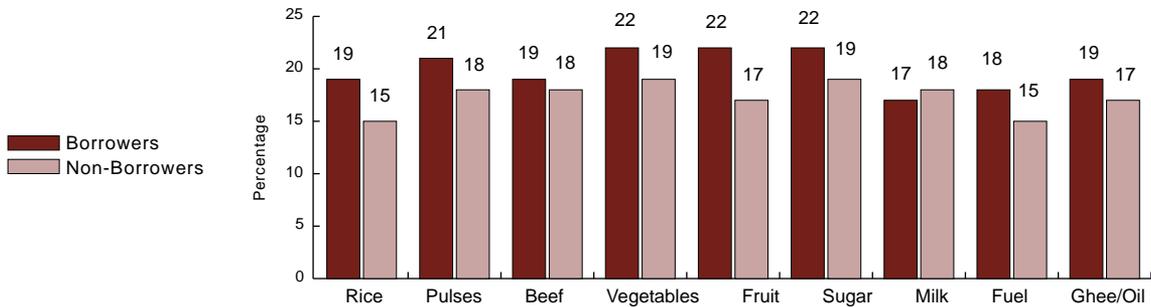
6. Change in Consumption of Key Food Items

Hypothesis: Participation in microcredit leads to increase in consumption of key high protein food items.

The difference in average expenditure on consumption of some of the high protein food items like rice, beef, vegetables, fruit, sugar, milk, oil and fuel is significant at 90-95% level of confidence. However, in the case of milk, it favored the non-borrower group. Hence, the hypothesis regarding key food items is held.

Hypothesis is: held not held partially held





7. Change in Consumption of Home Produced Items

Hypothesis: Participation in microcredit leads to increase in consumption of home produced items.

Overall, the only item which was found to be statistically significant was milk, with borrowers having a greater increase in the consumption of home-produced milk (26% for borrowers and 21% for non-borrowers). This was found to be statistically significant at the 95% confidence level.

Hypothesis is: held not held partially held

8. Acquisition of Financial Assets

Hypothesis: Participation in microcredit leads to increase in the possession of financial assets.

The results show that the non-borrowers experienced greater increments in their financial assets than the borrowers. However, the percentage changes in mean assets were found to be statistically insignificant for all the categories of assets.

Hypothesis is: held not held partially held



9. Acquisition of Household Consumer Durables

Hypothesis: Participation in microcredit leads to increase in the possession of consumer durables.

The data obtained suggests that the percentage of borrowers who accumulated household consumer durables during the period under study is statistically insignificant in comparison to non-borrowers.

Data collected for first time borrowers (a subset of the total sample) also shows a statistically insignificant difference at 90-95% level of confidence.

Hypothesis is: held not held partially held

10. Acquisition of Business Assets

Hypothesis: Participation in microcredit leads to increase in the possession of enterprise/livestock/agriculture related assets.

The results suggest that the acquisition of productive as well as business related assets was a course undertaken by both groups during the period under study.

However, a closer look at these individuals suggested that the borrowers made greater addition to their assets. The asset accumulation is more pronounced in livestock (buffaloes and goats), enterprise related assets (inventory stock) and not significant in agro-related assets (machinery, equipment). Property and land accumulation is also less prominent in both groups. Hence, the hypothesis is not held.

Hypothesis is: held not held partially held



11. Generation of Employment

Hypothesis: Participation in microcredit leads to increase in paid employment generated by three key sectors.

Data suggests that neither of the two groups made significant contributions towards employment generation: hence, the hypothesis is not held.

Two factors were discovered which restrict the total sample in this regard:

- The size of their business/agriculture or livestock activity.
- Scale of loan is insufficient to make substantial contribution to employment generation.

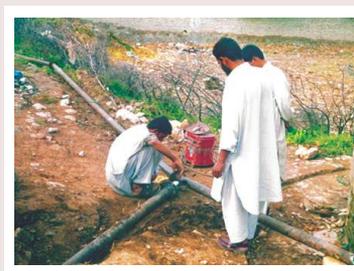
Hypothesis is: held not held partially held

12. Increase in Operating Surplus

Hypothesis: Participation in microcredit leads to increase in operating surplus.

Data suggests that borrowers experienced an increase in their operating surplus over the year under study (75% and 79%) while non-borrowers experienced no change in their operating surplus. In addition, the percentage change in the number of respondents who were able to accrue operating surplus is greater for borrowers (5%) than it is for non-borrowers (0%). The change in mean operating surplus was calculated to be 16% for borrowers and 6% for non-borrowers. However, results of hypothesis testing showed that there was no statistically significant difference between borrowers and non-borrowers.

Hypothesis is: held not held partially held

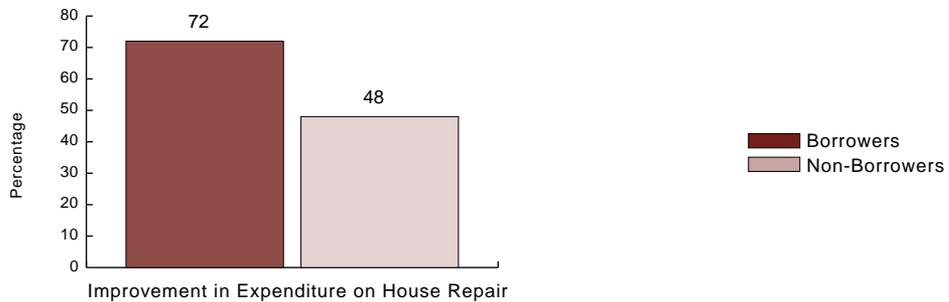


13. Improvement in Living Conditions

Hypothesis: Participation in microcredit leads to increase in expenditure on house repair.

Average expenditure spent on house repair by borrower was Rs. 4,064 and Rs. 2,363 in the current and previous year respectively, which shows the percentage increase in household expenditure for borrowers, is 72%. On the other hand, the average amount that the non-borrower group spent on house repairs showed an increase of 48% (Rs. 3,383 from Rs. 2,289). Difference between the two is not statistically significant at 95 % level of confidence. Hence, the hypothesis is not held.

Hypothesis is: held not held partially held



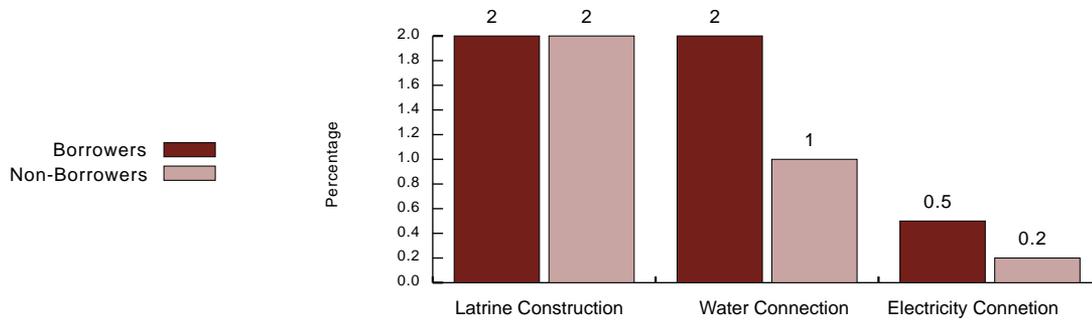
14. Additions to Household Facilities

Hypothesis: Participation in microcredit leads to the use of better household facilities (utilities).

The ratio of borrowers who obtained water and electricity connection in the period under study is higher as compared to non-borrower while the ratio of borrowers who constructed latrine as compared to non-borrowers is the same at 90-95 % level of significance. The hypothesis is held partially.

Hypothesis is: held not held partially held





15. Enhancement in Social Life

Hypothesis: Participation in microcredit leads to increase in discretionary and non-discretionary expenditures.

The data suggests that the borrower group spent more on weddings and medical treatment than non-borrower. However, non-borrower group spent more on education, recreation and travelling than the borrower group. Therefore, we can conclude that overall the results do not support the hypothesis mentioned above.

Hypothesis is: held not held partially held

16. Improvement in Occupational/Agricultural Practices

Hypothesis: Participation in microcredit leads to use of better agriculture inputs.

The data findings show some difference between changes experienced by borrowers and the control group in some of the cases, such as average expenditure on fertilizer, irrigation and usage of expensive seed. However, these differences are not statistically significant: the hypothesis is not held.

Hypothesis is: held not held partially held



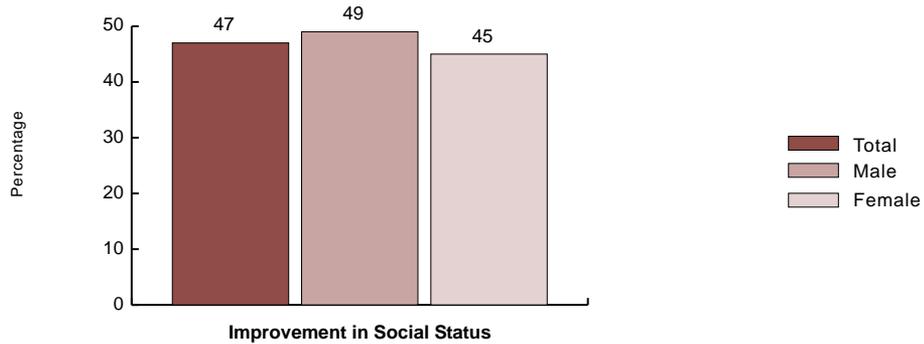
17a. Enhancement of Social Status of Men and Women

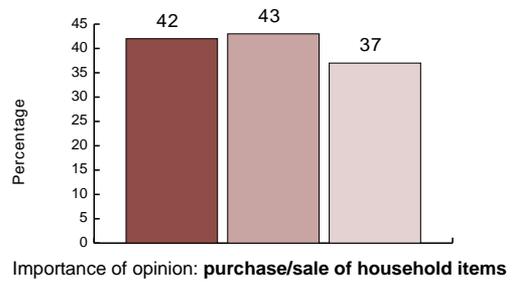
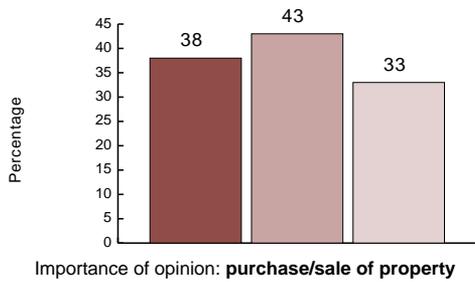
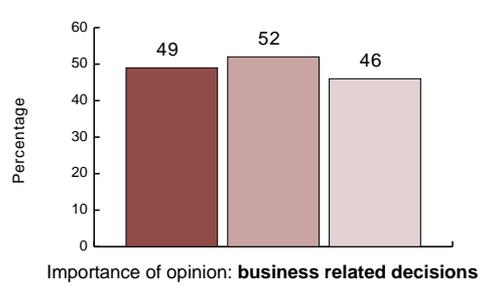
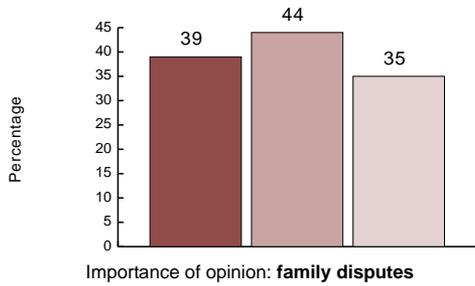
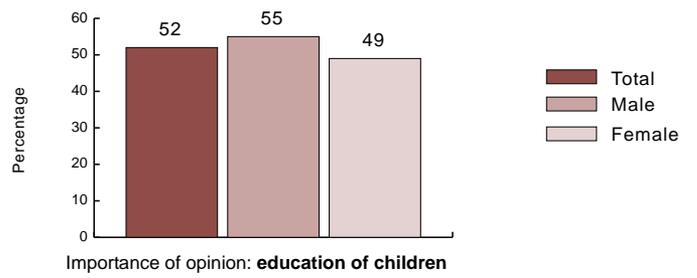
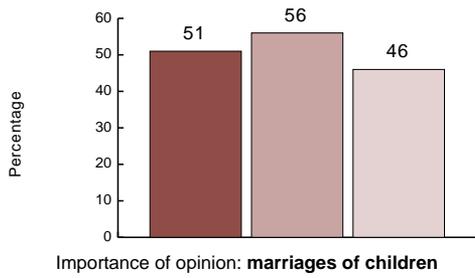
Hypothesis: Participation in microcredit leads to improvement in social status

Based on the data concerning change in perceived social status, participation in politics and control over financial resources a varied perspective emerges. However on the whole, the borrower group seems to have improved its social status during the period under study.

Hypothesis is: held not held partially held

Percentage of borrowers who perceived to have positive impact





17b. Improvement in Female Mobility

Hypothesis: Participation in microcredit leads to improvement in female mobility.

Data suggests that female mobility among borrower and non-borrower groups is almost the same for both periods. Therefore the hypothesis is not held.

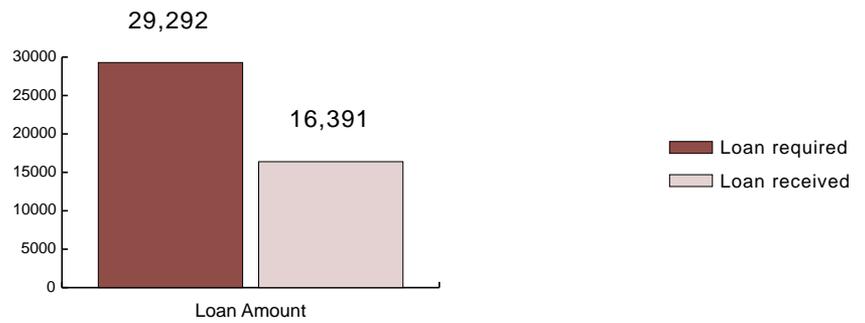
Hypothesis is: held not held partially held



IV - Related Findings

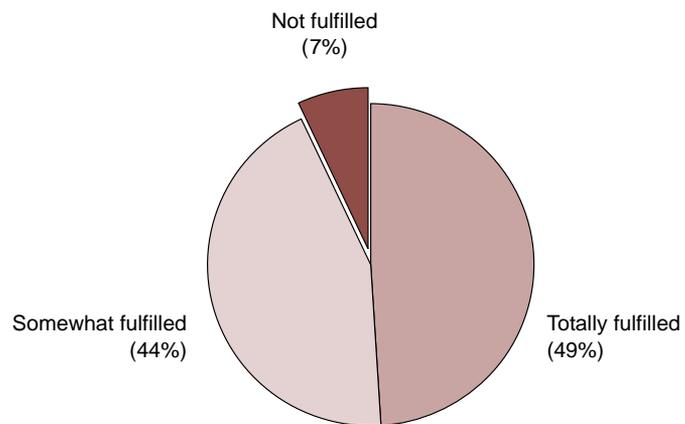
Loan Received by Borrowers

The average value of loans received by the borrower group was Rs. 16,391 while the mean value of loan required by the borrowers was Rs. 29,292.



Need Fulfillment through Loan

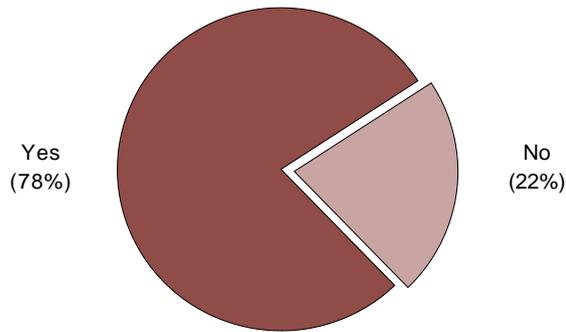
For the question regarding the extent to which their need was fulfilled through the loan taken from PPAF, the following results emanated:



Assessment of Benefit from Loan:

78% of the borrowers perceived that the loan had benefited them.

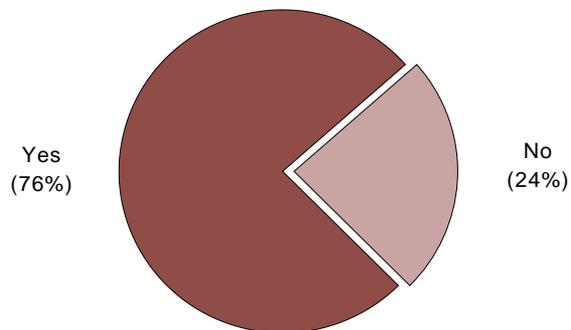
Did PPAF loan benefit you?



Views on Repeat Borrowing

76% of the borrowers were satisfied with their experience and expressed a desire to borrow again from the same partner organization.

Want to get loan from PPAF again?



Return on Investment

It is highly risky to calculate business expenses and deduct them from revenues accruing in both cash and kind for calculating the rate of return on loans averaging at Rs. 16,391, a part or all of which may have been used for business investments usually lumped up with a host of other expenses, loans and investments. Yet an exercise was attempted to quantify the same.

78% of borrowers experienced positive ROI. ROI has been calculated by directly asking the borrower about the estimated monetary benefits of the loan during its overall tenure. The responding borrowers were requested to summarize in monetary terms the profit earned on the loan which they had received. They were asked to compute the amount borrowed and the profit earned. On this basis, a rough Return on Investment was calculated: thus the estimation here is essentially based on the borrower's own perception.

V - Summary Assessment

		Held	Not Held	Partially Held
1.	Participation in microcredit leads to increase in personal income	✓		
2.	Participation in microcredit leads to increase in household income	✓		
3.	Participation in microcredit leads to increase in annual income from three key sectors			✓
4.	Participation in microcredit leads to increase in household consumption	✓		
5.	Participation in microcredit leads to increase in consumption of overall food		✓	
6.	Participation in microcredit leads to increase in consumption of key food items	✓		
7.	Participation in microcredit leads to increase in consumption of home produced items		✓	
8.	Participation in microcredit leads to increase in the possession of financial assets		✓	
9.	Participation in microcredit leads to increase in the possession of consumer durables		✓	
10.	Participation in microcredit leads to increase in the possession of enterprise/livestock/ agriculture related assets		✓	
11.	Participation in microcredit leads to increase in paid employment generated by three key sectors		✓	
12.	Participation in microcredit leads to increase in operating surplus		✓	
13.	Participation in microcredit leads to increase in expenditure on house repair		✓	
14.	Participation in microcredit leads to the use of better household facilities			✓
15.	Participation in microcredit leads to increase in discretionary and non-discretionary expenditures		✓	
16.	Participation in microcredit leads to the use of better agriculture inputs		✓	
17a.	Participation in microcredit leads to improvement in social status			✓
17b.	Participation in microcredit leads to improvement in female mobility		✓	



Pakistan Poverty Alleviation Fund

House 1, Street 20, F-7/2, Islamabad, Pakistan

UAN 111-000-102 | **Tel.** 92-51-265 3304, 265 3305, 265 3597, 265 3598, 265 2731, 265 2734 | **Fax.** 92-51-265 2246

Email: info@ppaf.org.pk | **Website:** www.ppaf.org.pk