



PPAF Microcredit Financing: **Assessment of Outcomes** 2005



by GALLUP Pakistan

Pakistan Poverty Alleviation Fund

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Foreword

Following the first national level microcredit study carried out by Gallup Pakistan in the year 2002, which covered 1800 households in all the provinces of Pakistan, it was thought appropriate to carry out a second study featuring 3,000 households across the country. In terms of depth and coverage, these two studies are the most intensive undertaken in Pakistan.

As in the first study, seventeen major hypotheses were tested in order to ascertain improvement or negative effects on the lives of the borrowers. This study also reveals that there is substantial first hand evidence to show significant improvement in income, consumption and investment levels of PPAF borrowers. Moreover, social status of women borrowers has undergone a positive change.

I sincerely hope that the Gallup studies will be useful to all 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 thank Mr. Ahmad Jamal and his team for the time and interest they have given in the preparation of this study. My special thanks to the partner organizations and the communities for their input and time, without which 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 the average low income households who 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 2001, and has been found to be equally true for the second, and comparatively larger, pool of borrowers surveyed in 2005.

There is overall improvement in the income as well as personal and business assets of PPAF borrowers. Their lifestyle by way of housing facilities has improved. The 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. But the direction of change is, on the whole, positive. Our research shows that the benefits of PPAF loan 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 exercise conducted by Gallup Pakistan in 2002 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, it is a survey report meant for quick and timely policy input. In that spirit 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. And 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 economic condition and social status of the borrower in comparison with non-borrower and comprises two main components: the core portion is based on analytical tests and results emanating are supported robustly by empirical data. The methodology followed for this section combines the "with-without approach" and the "before-after approach". The study was conducted while categorizing the total sample into two specific groups i.e. the control and the treatment group. The treatment group consisted of persons who had directly secured microcredit loans. The control group persons are in well-defined comparable situation however they were not beneficiaries of any loans. The data for both groups has been collected for the current year (Jan 2004-2005) and previous year (Jan 2003-2004) and the difference between the two groups in one year is impact of the program.

The second portion consists of findings which aren't 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 3,000 persons was selected in 24 districts, of which, 1,500 were borrowers (54% new, 46% repeat) and 1,500

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 atleast one loan during the period July 2001 and June 2003. 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 microcredit facility of PPAF. 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. The 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 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 operating surplus and 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 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 change in incomes of both the respondent groups i.e. borrowers and non-borrowers. It was noted that 64% of those who had borrowed in contrast to 49% of the non-borrowers experienced positive change in their income. The ratio of borrowers experiencing positive change 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 (21%) from previous to current year is proportionally higher than the non-borrower group (9%) 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 change in household incomes of both the borrowers and non-borrowers. It was noted that 65% of those who had borrowed in contrast to 53% 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.

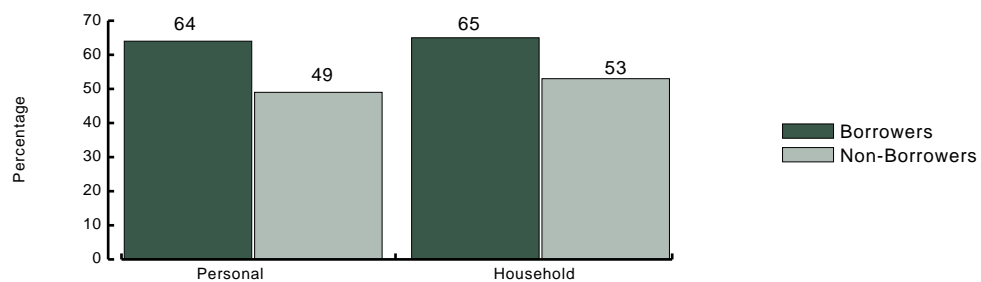


B. Increase in the average income of the borrower group (13%) is proportionally higher than the non-borrower group (9%) at 95 % level.

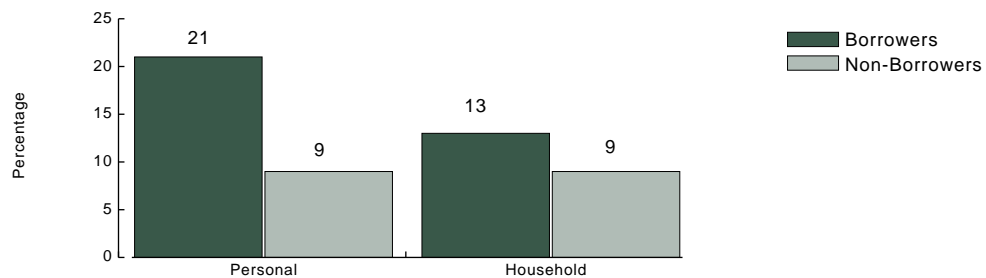
Thus data confirm for both categories (A & B) that the hypothesis is held as a statistical difference is significant for borrower group.

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 agri-related respondents, 53% of those who had borrowed in contrast to 43% 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 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 the borrower group (35%) was observed to be proportionally higher than the non-borrower group (29%) 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

Livestock

- A. In the time period during which the study was conducted it was noted that amongst livestock related respondents 56% of those who had borrowed in contrast to 37% 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 (12%) was observed to be proportionally higher than the non-borrower group (2%) at 95 % level of confidence.



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

Enterprise

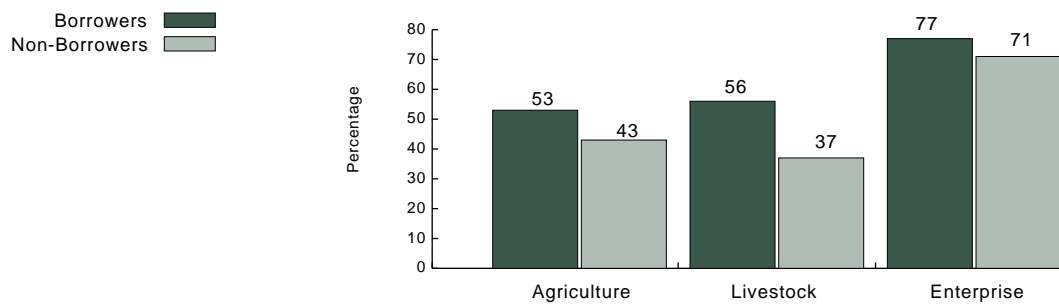
- A. In the time period during which the study was conducted it was noted that amongst those related with enterprise, 77% of those who had borrowed as opposed to 71% of the non-borrowers experienced positive changes in their gross annual monetary as well as non-monetary income from enterprise/commerce. 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 (10%) at 95 % level of significance.

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

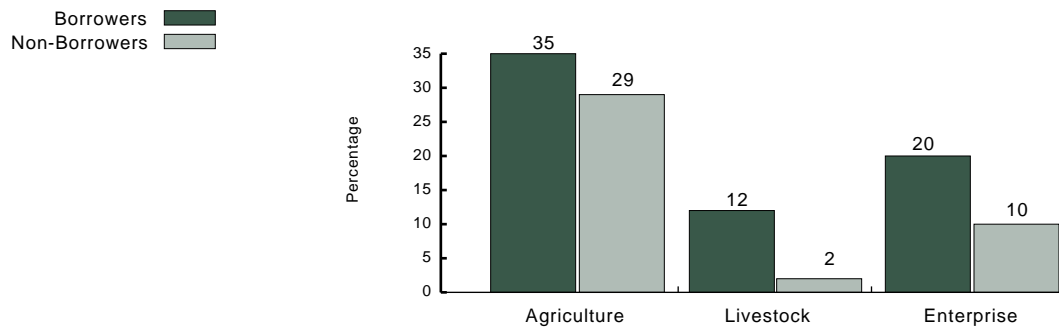
Hypothesis is: ☒ held ☐ not held ☐ partially held



(A)
Percentage of respondents experienced positive change in 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 65% of those who had borrowed in contrast to 46% of the non-borrowers experienced positive changes in their overall expenditure on consumption. The ratio of borrowers experiencing positive change in their expenditure on consumption is significantly higher than that of non-borrowers at 95% level of confidence.
- B. Increase in the average income of the borrower group (19%) is proportionally higher than the non-borrower group (13%) but the significant difference between them is not present.

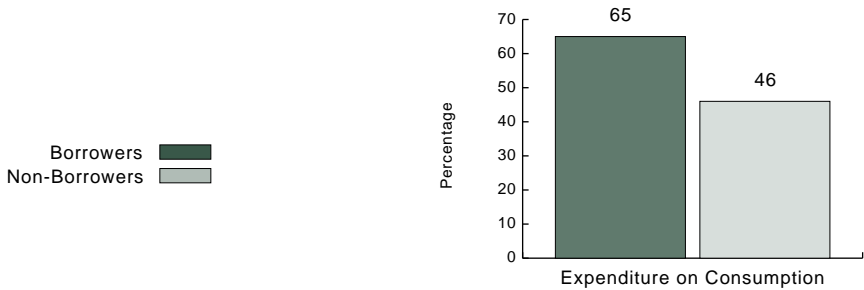
Thus data suggest that amongst both categories (A & B) hypothesis is held only for one as a statistical difference is significant for borrower group for A.

Further, the percentage change in average expenditure on consumption is calculated for first time borrowers (21%) to non-borrowers (17%) is significantly higher at a 90% confidence level. This can be explained by keeping in mind that the change immediately after the first loan adds more value than the second loan because the base on which the calculation is being made is already a higher base.

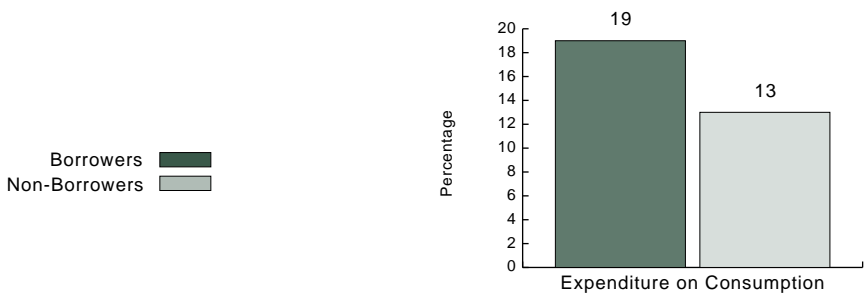
Hypothesis is: ☐ held ☐ not held ☒ partially held



(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 14% and 13% respectively. However, the difference is so insignificant that it can be accounted for by a statistical error.

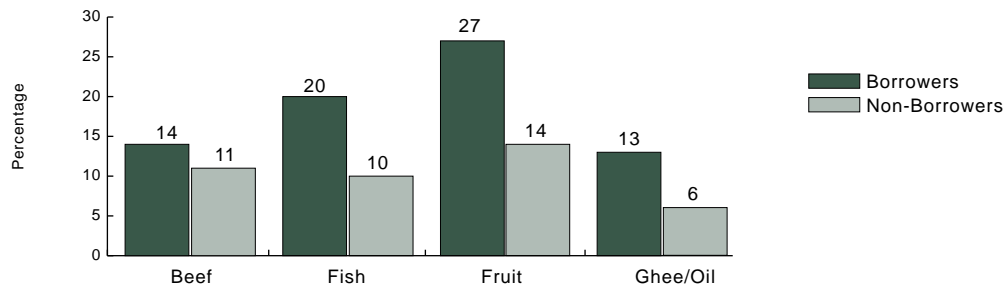
Hypothesis is: ☐ held ☒ not held ☐ partially held

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 beef, fish, ghee/oil etc is significant at 90-95 % level of confidence. 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.

On the whole change in the consumption of some of the home-produced items (wheat, honey) was slightly higher among the borrowing households as compared to non-borrowing households, during the period under study. The difference for most of the items is statistically not significant for borrowers.

Hypothesis is: ☐ held ☒ not held ☐ partially held

8. Acquisition of Household Consumer Durables

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

The data obtained suggest that the percentage of borrowers, who accumulated household consumer durables, during the period under study, is slightly higher in comparison to non-borrowers. However, the difference is not statistically significant for most of the items.

Data collected of first time borrowers, a subset of the total sample, show positive results for most of the items with statistically significant difference at 90-95 % level of confidence.

Thus the results suggest that though the hypothesis for overall borrower group is not held but it is held for first time borrower which explains that first loan mostly contributed to household acquisition of consumer durable.

Hypothesis is: ☐ held ☐ not held ☒ partially held



9. 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 borrower made more addition to their assets. The asset accumulation is more pronounced in livestock (cows, buffaloes, goats etc.) and enterprise related assets (inventory stock) and not significant in agri-related assets (machinery, equipment). Property and land accumulation is also less prominent in both groups. Hence, the hypothesis is partially held.

Hypothesis is: ☐ held ☐ not held ☒ partially held

10. Building of Financial Assets

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

The data for the total sample suggests that the borrower group made more additions to liquid assets such as cash & non-formal deposits during the course of the study in comparison to the non-borrower group. However, the amount of the loan that they have acquired is too little to allow them to participate in more formal financial instruments such as bank accounts and investments. Hence, the hypothesis is partially 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.

The data suggest 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:

1. The size of their business/agriculture or livestock activity.
2. 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.

The data suggest that around 98-99% of borrowers reported positive operating surpluses in both periods. Among the non-borrowers only two third of the sample (67%) experience operating surplus. So on the basis of the fact that almost all of the borrowers have positive operating surplus the hypothesis is held.

Hypothesis is: ☒ held ☐ not held ☐ partially held

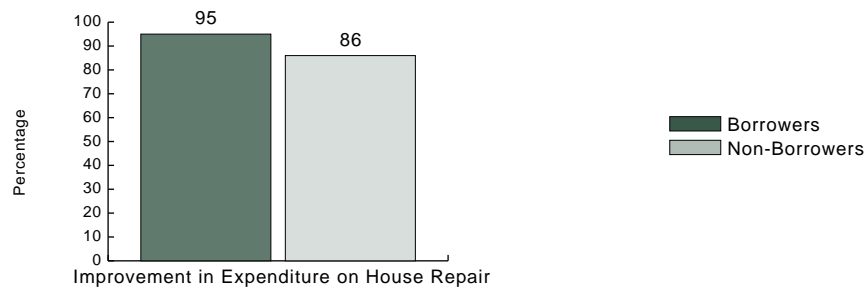


13. Improvement in Living Conditions

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

The average expenditure spent on house repair by borrower was Rs.4,130 and Rs.2,123 in current and previous year respectively which shows the percentage increase in household expenditure for borrowers is 95%. On the other hand, the average amount that the non-borrower group spent on house repairs showed an increase of 86% (Rs.2,297 from Rs.1,235). The difference between the two is statistically significant at 95 % level of confidence. Hence, the hypothesis is held.

Hypothesis is: ☒ held ☐ not held ☐ partially held



14. Additions to Household Facilities

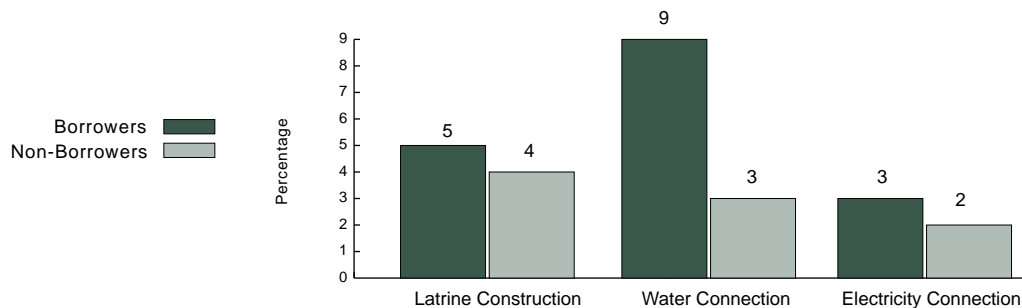
Hypothesis: Participation in microcredit leads to the use of better household facilities (utilities).

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

The hypothesis is held.

Hypothesis is: ☒ held ☐ not held ☐ partially held





15. Enhancement in Social Life

Hypothesis: Participation in microcredit leads to increase in expenditure on miscellaneous events and items.

The data suggests that borrower group spent more than non-borrower on miscellaneous social events and other related activities. However, after comparing this data with that of the previous year, it is realized that a marked difference does not exist between the two. Hence, there can be other factors not relevant to our study contributing to the difference between the spending

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 findings from data show a significant difference between the changes experienced by the borrowers and the control group in some of the cases like average expenditure on fertilizer (22%) and usage of expensive seed, while for other items the difference is not significant. Hence, the hypothesis is partially held.

Hypothesis is: ☐ held ☐ not held ☒ partially held



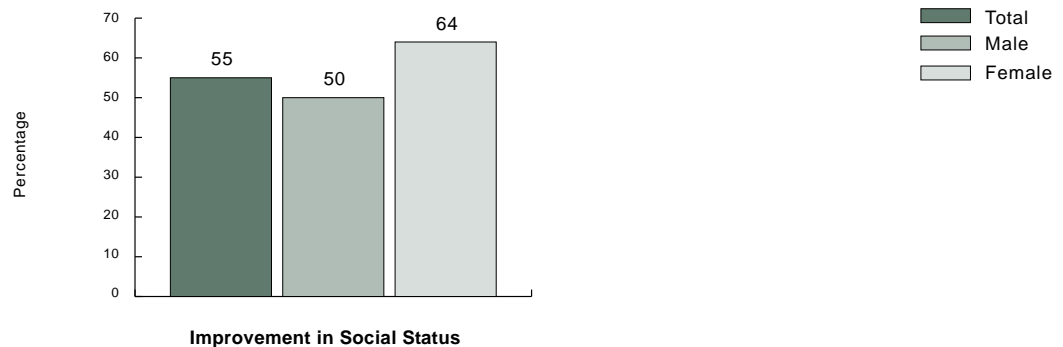
17a. Enhancement of Social Status of Men and Women

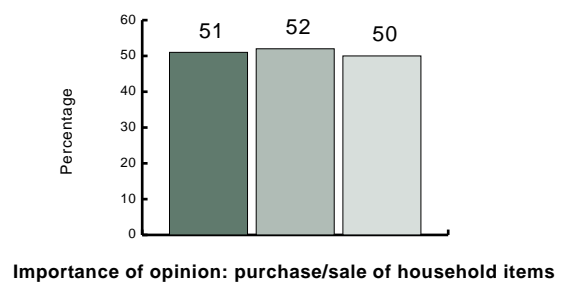
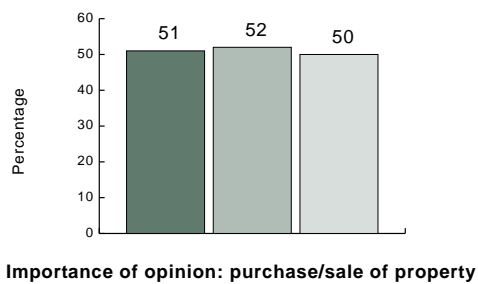
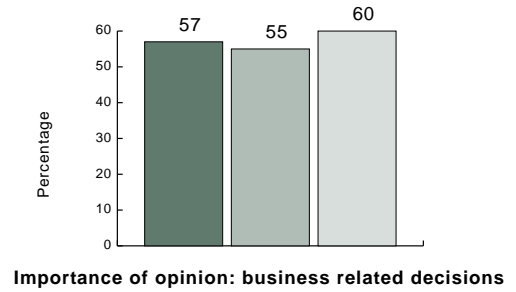
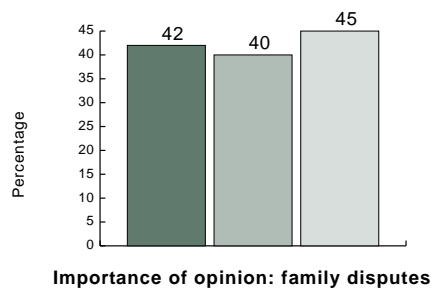
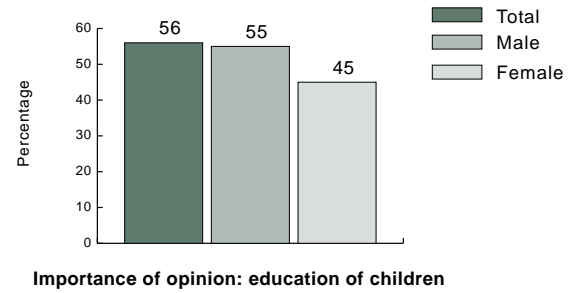
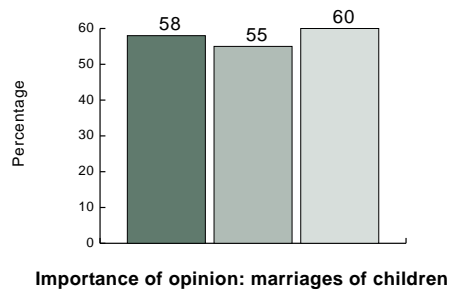
Hypothesis: Participation in microcredit leads to improvement in social status

Based on the data concerning change in perceived social status, participation in politics and control over financial resources, we get a mixed picture. 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 suggest that female mobility among borrower and non-borrower groups is almost same for both periods. Therefore the hypothesis is not held.

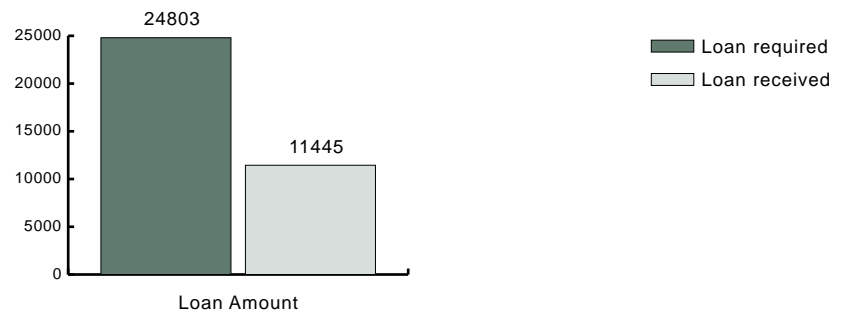
Hypothesis is: ☐ held ☒ not held ☐ partially held



IV - Related Findings

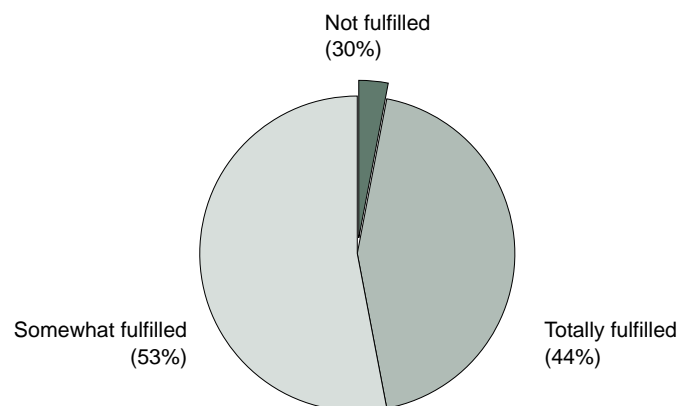
Loan Received by Borrowers

The average value of loans received by the borrower group was Rs. 11,445 while the mean value of loan required by the borrowers was Rs.24, 803.



Need Fulfillment through Loan

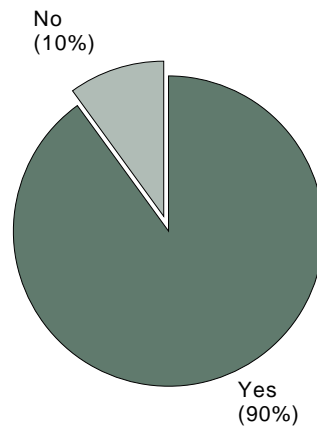
On asking about extent to which their need was fulfilled through the loan taken from PPAF, the following results emanate.



Assessment of Benefit from Loan:

90% of the borrowers perceived that the loan had benefited them.

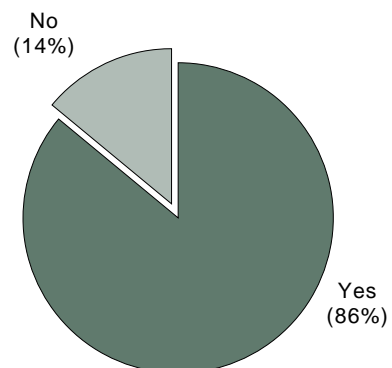
Did PPAF loan benefit you?



Views on Repeat Borrowing

86% 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 very hazardous 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. 11,445 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.

The 93% of borrowers experienced positive RoI with average net amount of 71% calculated by deducting estimated cost of financing. We have tried to calculate the RoI 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. So the RoI estimated 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 consumer durables			✓
9.	Participation in microcredit leads to increase in the possession of enterprise/livestock/ agriculture related assets			✓
10.	Participation in microcredit leads to increase in the possession of financial 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 expenditure on miscellaneous social events and related activities		✓	
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		✓	



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