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Impact of Financial Inclusion Using Community Investment Fund on Poverty Graduation in Rural Sindh of Pakistan

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PAPER INFO	ABSTRACT
	Financial inclusion offers significant benefits to unbanked poor population but barriers such as low literacy, lack of trust in formal financial institutions, and high transaction costs often hinder the use of formal banking services. On the other hand, Community Investment Fund (CIF) is a revolving grant which is managed by community-based organisations and provides a low-cost sustainable solution. The paper examines the impact of financial inclusion through CIF funds on poverty graduation in Rural Sindh of Pakistan. The Poverty Scorecard (PSC) tool is used to assess the changes in the poverty status of CIF loans and grant beneficiaries with before and after approaches. A household survey data of rural Sindh covering 4,023 randomly selected sample households is analysed. The findings suggest that financial inclusion using community investment funds has impacted poor households positively and helped in graduation of the poor households from a lower poverty band to higher poverty band. Compared to conventional sources of finance like Microfinance Banks, the findings suggest that CIF loans appear to be largely cost effective. We thus recommend increasing the coverage of the poor segments of population in Pakistan via CIF that provides low-cost sustainable solution for poverty graduation increasing the cost effectiveness of social protection programme in the country.

1 Introduction

A large proportion of the population especially the poor and women in Pakistan does not have access to the formal financial system. Government of Sindh in collaboration with the Rural Support Programmes (RSPs) and other non-governmental organisations working in Sindh, has initiated various interventions to extend financial services to underserved population in Sindh. Government of Sindh commenced Peoples Poverty Reduction Programme with the implementing organisations—the Rural Support Programmes (RSPs) in Sindh through innovative financial services such as Community Investment Fund (CIF) and Income Generating Grants (IGG), components funded by the European Union (EU) under Sindh Union Council and Community Economic Strengthening Support (SUCCESS) program that provided financial services to women through community organisation in rural Sindh. In this context, objective of this research paper is to assess the impact of financial

inclusion through Community Investment Fund (CIF) on poverty graduation among poor households in the rural areas of Sindh province, Pakistan.

The EU funded SUCCESS programme is based on the RSPs' integrated community-driven development strategy. It involves the three tiers of local institutions formed by women living in rural areas, which are Community Organisations (COs) formed by women at neighborhood level, Village Organisations (VOs) – federation of COs at village level, and Local Support Organisations (LSOs) – federation of VOs at union council level (Rural Support Programmes Network (RSPN), 2021). Within the context of Pakistan, among multiple role-players, the Rural Support Programmes (RSPs) have been pioneering community-driven development approaches since 1982 when Aga Khan Foundation set up the Aga Khan Rural Support Programme (AKRSP) as a catalytic organisation to work in northern Pakistan (Gilgit-Baltistan and Chitral). The AKRSP's approach was later replicated across Pakistan and now there are nine RSPs and their network called the Rural Support Programme Network (RSPN). Through its member RSPs, RSPN has an outreach to 8 million rural households in Pakistan, representing a population of over 55 million in 152 out of 158 districts of Pakistan (Rural Support Programmes Network (RSPN), 2023).

While financial inclusion can offer significant benefits to unbanked populations, particularly in poverty alleviation and economic empowerment, the demand side barriers such as low literacy, extreme poverty, lack of trust in formal financial institutions, high transaction costs, geographic isolation, limited financial infrastructure, and cultural or social norms often hinder the use of formal banking services ((Asli Demirguc-Kunt, 2018); (World Bank Group, 2014)). On the supply side banks are reluctant to lend to poor households due to the lack of collateral and the perceived risk of non-repayment, further excluding them from financial services (Armendariz & Morduch, 2010); (Beck, Demirgüç-Kunt, & Peria, 2008).

The genesis of CIF as an alternative financial service lies in addressing the constraints faced by poor households in accessing financial services. This research therefore addresses the following key questions:

1) Does CIF and IGG ensures the inclusion of women from the poor and poorest households in the development process?

2) Does access to CIF/IGG reduces poverty among women by improving the poverty scorecards of the poor and poorest households?

3) Does CIF/IGG provide cost-effective financial access to the poorest and poor households?

The paper is structured as follows. Section 1 introduces the topic. Section 2 provides a review of the literature. Section 3 lays out hypotheses to be tested and indicators that are developed to test them. Section 4 details methodology and data. Section 5 discusses results and findings in detail. Section 6 concludes the paper.

2   Review of Literature

In the past couple of decades, evidence abounds that a large portion of the world population is excluded from the formal financial system. Often the poor, women, and microenterprises are the major sufferer of this exclusion, restricting their opportunities to work, earn and live a decent life. Hence, Financial inclusion is considered an important policy intervention to mitigate poverty, ensure food security, improve health, reducing income and gender inequality, and women empowerment. The United Nations General Assembly (UNGA) considers it as a key enabler to achieve at least seven of its Sustainable Development Goals (UNSGA, 2015).

Sahay et al. (2015) consider financial inclusion as a multidimensional concept. It is perceived as a policy tool for attaining a range of objectives from "sustainable and inclusive economic growth, employment generation, poverty reduction, and income equality" (Omar & Inaba, 2020). In

particular, it seeks to mitigate global poverty through the inclusion of previously excluded groups – women, people living in remote areas – by providing them with financial resources at an affordable rate (Bold, et al., 2012; Chibba, 2009; Kpodar & Andrianaivo, 2011; Neaime & Gaysset; 2018, Sarma & Pais; 2011)[1].

Financial inclusion is considered as an important policy intervention to achieve twin objectives of poverty reduction through women empowerment. In Kenya, financial inclusion has helped women-headed households to save more, move to micro-enterprises from agriculture, and reduce extreme poverty by 22 percent (Demirgüç-Kunt, et al., 2017). When provided with saving accounts, women in Kenya saved more and invested 60 percent of their savings in their businesses (William & Suri, 2014). In Nepal, opening of a saving account was attributed to more spending on food (15%) and education (20%) by women-headed households (Karlan, et al., 2016). Saving accounts helped farmers in Malawi to invest 13 percent more in machinery, which raised farm output by 15 percent (Muralidharan, et al., 2016).

In Pakistan, the poor mostly acquire loans from informal sources. Lack of income and resources force poor to take loans at expensive interest rate to meet basic necessities of life and the difficulty of collateral leave them at the mercy of the informal avenues. Thus, there remains a great potential for growth of microfinance sector in Pakistan (Anwar, 2005).

Pakistan has the third-highest unbanked adult population in the world at 100 million. Though, share of the adults with a bank account has risen to 20 percent from a low base of 10 percent in 2011; the share of unbanked women has not changed much since then (Demirgüç-Kunt, et al., 2018). The poor, especially those living in rural areas, have limited access to the formal institutions of credit in Pakistan[2]. The unmet need of the poor by these institutions led to the emergence of alternative avenues of credit provision in Pakistan – microfinance schemes being the major initiative to this end.

Table 1
Service Charges of Major Microfinance Banks in Pakistan

	Service charges	Tenure	Loan Ticket
Khushahli Bank			
SarsabzKarobar	25% APR	3-12 months	20,000 – 150,000
KhushaliQarza Plus	33% APR	6-18 months	50,000 - 150,000
Khushali Livestock Loan	33% APR	3-24 months	50,000 – 150,000
First Microfinance Bank			
Agriculture	31.40%	-	150,000
Livestock	31.40%	-	150,000
Enterprise	31.90%	-	150,000
Finca Microfinance Bank Limited			
Finca KarobariQarza	28-29%	6 - 18 months	25,000 – 150,000
Finca MaweshiQarza	28-29%	6 - 18 months	50,000 - 150,000
Finca KashtkarQarza	32%	3 – 12 months	50,000 – 150,000

Source: Websites of the respective institutions.

The inefficiencies, default risks, more reliance on cash, and persistently large unmet need for credit by the population paved way for the National Financial Inclusion Strategy (NFIS) (2018). It aimed to 1) Enhance the usage of Digital Payments; 2) Enhance Deposit Base; 3) Promote SME Finance; 4)

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[1]According to estimates, about 1.7 billion adults were without a bank account in 2018 (Demirgüç-Kunt*et al*, 2018).

[2] Non-institutional and informal sources accounted for about 65% of outstanding debt of rural households according to the Agriculture Census of 2000.

Increase Agricultural Finance; 5) Enhance share of Islamic Banking (Government of Pakistan, 2018). Notwithstanding these objectives, the NFIS (2018) failed to put due emphasis on the most underserved population – the women, especially those in the rural areas. Women's participation through CIF can empower women by increasing their intra-household decision making, economic participation and mobility.

Outreach and cost effectiveness of microfinance remained controversial since cost of borrowing for the poor is reported to be high. Table1 indicates that Microfinance Banks (MFBs), which espouse to cater to the poor population, have interest rates that might be out of reach of the same segment. The Khushali Bank, the largest MFB in Pakistan, charges interest rates in the range of 25 to 33%, depending upon the type and loan amount. Similarly, interest rates charged by the First Microfinance Bank hover in the range of 31-32%. Finca Microfinance Bank, being no exception, has interest rates between 28-32%. High operating costs of bank branches meant that MFBs would find it difficult to reach the potential borrowers in remote and far-off areas, to the exclusion of women in particular.

In contrast to the high interest rates charged by the Microfinance Banks, the community mobilisation approach through Community Investment Fund appears to be cost effective. Sindh Union Council and Community Economic Strengthening Support --SUCCESS programme funded by the EU launched a poverty reduction programme in 2016 in eight districts of the Sindh province of Pakistan. CIF was one of the key components of this project.

Unlike MFBs expensive overhead operation, CIF is run by local community institutions, and is assumed to be low cost in comparison to MFBs as the institutional overheads of Community Organisations (COs) are low compared with government and other financial institutions, including microfinance. In this context, it would be interesting to examine the cost effectiveness of CIF relative to other conventional microfinance loan programme in Pakistan. Below we discuss the novel features of community investment funds and other similar interventions.

2.1   Community Investment Fund (CIF)

CIF is a revolving capital fund which is managed by community-based organisations. Unlike microcredit institutions, which rely on specialised structures and hence are costly to maintain in remote areas, CIF is run by local community institutions, which makes them a low-cost sustainable solution for provision of funds to the poor. Further, the formal Microfinance Institutions (MFIs) often do not have the proper lens to lend to poor segments of the community.

CIF was pioneered by Society for Elimination of Rural Poverty (SERP) in Andhra Pradesh in the late-1990s (Khalil, 2013). In Pakistan, CIF was introduced in 2007 in District Layyah of Punjab by the RSPN and Punjab Rural Support Programme (Shorebank, 2009). Since its inception, CIF has expanded considerably. According to a 2012 estimate, the total CIF amount disbursed by RSPs in Pakistan is approximately PKR 1.6 billion/USD 15.6 million and the total number of borrowers is 146,917 (cited from Khalil, 2013).

CIF is targeted at women who belong to households who live at or below the poverty line. These poor and marginalised segments of the society are often not part of the conventional financial services offered by the banks. Many reasons are cited for this predicament. First, these people reside in areas where coverage of the formal financial institutions (FFI) is either absent or patchy at best. Second, the extension of credit to these people is considered risky as they may not be able to pay back the loan. Third, cumbersome procedures and lack of collateral make the poor reluctant to access these services (DFID, 2006; SBP, 2011). As a result, the people who need the credit the most are often not catered to by the formal financial institutions. CIF is an alternative means to provide these unserved and underserved poor with affordable and convenient modes of financial services at their doorstep.

CIF proved to be a transformative force in this regard as it provides a revolving credit to the poorest to be used in income generating activities to lift them out of the poverty trap. These loans are

complimented with guidance and Micro Investment Plans (MIPs) for efficient utilisation of loan money in starting income generating activities. Through initial small loans, the consumers of CIF learn to manage cash and thus be eligible for loans of a bigger amount later on. The CIF depends on the federated women's organizations that decide on the issues of CIF and its efficient maintenance.

CIF in its introductory phase, in Union Council Jamal Chapri (District Layyah, Punjab), followed two different delivery mechanisms. One, a direct lending approach implemented by PRSP with support from the RSPN, and the other - an indirect delivery mechanism providing CIF loans through the LSO structure, which was also implemented by PRSP with funds provided by RSPN to its LSO structure. Its popularity rose sharply among the poorest of the communities, especially women, leading to increased CIF services being offered by the Rural support organisations. This expansion of CIF was largely funded by Pakistan Poverty Alleviation Fund (PPAF) and the Government of Sindh through the Union Council Based Poverty Reduction Programme (UCBPRP).

2.2   *Income Generating Grants (IGG)*

Unlike CIF, which is a loan, Income generating Grant (IGG) is a one-time cash grant to the poorest community members. These grants are accompanied by guidance for these poor, which enables them to start income-generating activity to increase their household incomes. Women lead this effort through Community Institutions (CIs). For targeting women for the IGG, a Poverty Scorecard is used and households having a Poverty Score between 0-11 become eligible to access IGG. Micro Investment Plans (MIPs) are also used to support the needs of the households and guide the household for the best utilisation of the IGG grant. IGG targets the most vulnerable women who are not in the position of returning the cash assistance they received.

3   Hypotheses and Indicators

The paper is structured around testing six hypotheses. For these hypotheses, specific indicators have been developed to analyse the impact of the financial intervention on poverty and women empowerment.

H1: CIF and IGG ensure the inclusion of women from the poor and poorest households in the development process.

H2: Access to and utilisation of capital (CIF and IGG) improves the poverty score of beneficiaries' households.

H3: CIF/IGG provide cost effective financial access to the poorest and poor households.

4   Methodology and Data

The study uses quantitative methods as well as qualitative information and analysis wherever needed. Due to the non-availability of reliable controls, the design of the assessment is limited to measure the impact of financial inclusion through community investment funds on poverty using a before and after intervention design.

4.1   *Quantitative Methods*

The methodology to assess the impact of community investment fund is based on using a household survey data which has been conducted as part of the overall assessment SUCCESS programme to examine the impact of CIF. To assess the hypotheses, data has been taken from the CIF/IGG Survey which was collected by selecting a sample of 4023 women beneficiary households within the sample villages and the union councils taken from each of the 8 programme districts during September and November 2020.

The study also uses baseline RSPN/RSPs Poverty Scorecard (PSC) survey data conducted in 2016 to track the changes in poverty scorecards and other indicators using a before and after approach.

4.2   *Sampling Design and Household Survey Data*

For sampling design, Simple Random Sampling (SRS) technique was used to draw a sample from the population. Using 80% power of sample, 95% confidence coefficient, and 3% Standard error of estimate. Master sample of 2007 of CIF and 2000 of IGG beneficiary households was computed.

First, the Sampling frame comprising of LSOs and VOs has been used to draw Secondary Sampling Unit (SSU), Primary Sampling Unit, Sample household, and replacement Sample. Using the Multistage sampling technique at stage one, from all tehsils of districts "100 LSOs/Union Councils as a Secondary Sampling Unit (SSU)" has been selected at random. At stage two, from each LSOs "Two Enumeration Units: Villages/VOs per LSO" have been selected at random as Primary Sampling Units (PSU). At stage three, from each village at least 5 beneficiary households have been selected using the random number method. Sample lists with an additional 25% replacement sample was prepared prior to field operations and shared with RSPN and field teams for data collection.

Total population of beneficiaries who received CIF loan at least 365 days (one year) earlier from the current CIF & IGG Survey, 2020 comprised of 66,306. Beneficiaries who had received a loan for livestock were 82%, followed by agriculture at 10% and enterprise at 8%. Keeping in-view of population variation master sample allocation was made using the Probability Proportion to Size technique. PPS provides lower proportions to Agriculture and Enterprise loan categories, which is statistically insignificant and cannot be used for generalized findings.

In this regard, some adjustment was made in PPS sample allocations. The bases for sample adjustment are the 95% confidence coefficient and standard error of estimate (7% - 10%). A simple random sample estimator produces sample size of 196 for a lot when standard error is 7% and in the case of 10% standard, it gives 96 sample size.

Probability proportion to size technique has been used to allocate the master sample to each district. But to generalize the findings at the district level, the sample is adjusted by a minimum sample size of 196 with the 95% confidence coefficient and 7% standard error of estimate, and sample by category remains above 96 with the 95% confidence coefficient and 10% standard error of estimate sample size. Therefore, it was decided at the inception phase that the adjusted sample for each district should not be less than 96.

The above approach has also been adopted to draw a sample for livestock, agriculture, and microenterprise loan for IGG beneficiary households. Therefore, samples for each category i.e., agriculture 400, enterprise 400, and livestock 1200 are computed for the study. Tables A1-A4 at Annex I shows sample distribution for CIF and IGG impact assessment survey for eight SUCCESS programme districts.

Beneficiary population distribution shows the unequal distribution of beneficiaries by category and by district. This unequal distribution also prevails in the sampled LSOs and VOs and the required numbers of the sample do not exist in the selected LSO's and VO's. But keeping in-view the reserved share for enterprises and livestock category during the survey, a booster sample is drawn at random to fulfill the sample coverage requirement.

5   Results and Findings

This section presents results and findings. CIF exclusively targeted the poor women beneficiary households (PSC between 0-23) who are generally not catered to by a typical microfinance scheme. On the other hand, IGG has targeted the women beneficiary households who were identified as the poorest of the poor with a 0-12 poverty scorecard including disadvantaged, minorities, and differently abled groups.

The results as measured by the household survey indicate that 100% of our sample beneficiary households (4,023) who accessed the CIF and IGG were women from the poor households and their

poverty score was below 24[3]and the Income Generating Grants (IGG) was provided to poorest households with PSC between 0-12, validating the hypothesis (H1) that CIF and IGG ensure inclusion of women from the poor and poorest households in the development process. Overall 97% (426, 328) of the poor households (with PSC 0-23) became member of the Community Organizations in the eight program districts (Hussain 2023).

This has been possible since programme design has ensured membership to community ogranisations (COs) and a micro-investment plan geared towards income generating activities as a precondition for the loan and grant. Thus, CIF and IGG work as an incentive for poor women to participate in the COs.

This conclusion is consistent with existing literature highlighting the importance of targeted financial inclusion programmes in enhancing the socio-economic status of marginalised women (World Bank, 2014; Kabeer, 2005). Such programmes are instrumental in promoting women's empowerment and reducing poverty among the poorest segments of society.

5.1   Changes in Poverty Scorecard

The Poverty Scorecard (PSC) is a tool to track changes and monitor poverty trends over time. The poverty scorecard represents data on household socioeconomic characteristics, basic amenities of life, and basic assets to earn a livelihood. It identifies poor households by assigning a composite score from 0 to 100 based on observable indicators, where scores closer to 0 indicate a higher likelihood of being extremely poor, and scores closer to 100 suggest the household is non-poor**.**

To track changes in poverty score over time and assess the impact of interventions on poverty scores of the beneficiaries' household, we have distributed them into different poverty bands by grouping the poverty scorecard from 0-11, 12-18, 19-23, 24-34, 35-59 and 60-100.

Table 2 reports the poverty band based on the scorecard in the 2016 baseline and the survey of 2020 along with the percentage changes. The percentage change between 2016 and 2020 indicates that although 6.9% of CIF beneficiaries increased in the lowest poverty band of 0-11, a higher proportion of 13% and 17.7% beneficiaries declined respectively in 12-18 and 19-23 poverty bands showing a movement into other poverty bands. Moreover, 19.5% and 4.2% of beneficiaries moved into a higher band of 24-34 and 35-100 indicating an improvement in poverty scorecard after the CIF loan. Clearly, a higher proportion of CIF beneficiary households graduated and moved from lower poverty bands to higher poverty bands implying reduced poverty levels after using CIF loans. The changes in poverty scorecards are significant at the 5% level (See Annex 2). These results thus validate the hypothesis H2 that access to and utilisation of capital improves the poverty score of CIF beneficiary households. This provides the evidence that the financial inclusion through community mobilisation approach with community investment fund is found to have a positive impact on poverty scores of the poor households implying reduction in extent of poverty or graduating from the lower band of poverty to higher level among the CIF beneficiary households in rural Sindh of Pakistan.

The results relating to IGG beneficiary households show that 28.8% of IGG beneficiaries moved out of the lowest poverty band of 0-11 into a higher poverty band. Whereas 18.6%, 0.9%, 8.2%, and 1.1% beneficiaries respectively moved into a higher band indicating an improvement in the poverty scorecard after the IGGs implying reduced poverty levels. Evidently, higher proportions of IGG beneficiary households moved from lower poverty bands to a higher poverty band.

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[3] Poverty scorecard (PSC) is a tool developed by World Bank and adopted by the RSPs and BISP for targeting poor households for poverty targeted and social safety programs. Household with a PSC score from 0-23 are considered the poorest among the poor household.

The changes in poverty scorecards are significant at the 5% level (see Annex 2). These results are thus validating the hypothesis that access to and utilization of capital via IGG also improves the poverty score and reduces in extent of poverty among the IGG beneficiary households.

Table 2

Poverty Band Wise Status of Sample Households (% of Households)

Poverty Score Bands Number of Households (n)	CIF Baseline 2016 2015	Current Survey,2020 2015	Percentage change -	IGG Baseline 2016 2008	Current Survey,2020 2008	Percentage change -
0 – 11	16.4%	23.3%	6.9%	73.1%	44.3%	-28.8%
12 – 18	45.7%	32.7%	-13.0%	15.5%	34.1%	18.6%
19 – 23	38.0%	20.3%	-17.7%	11.4%	12.3%	0.9%
24 – 34	0.0%	19.5%	19.5%	0.0%	8.2%	8.2%
35 – 59	0.0%	4.2%	4.2%	0.0%	1.1%	1.1%
60 – 100	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%

Source: Calculation from CIF & IGG Survey, 2020, RSPN and CDPP

5.2   Households Movement in Poverty Score Bands

Table 3 presents cross-tabulation on the movement of the CIF beneficiary households in different poverty score bands over the baseline in terms of number and % of households. The yellow color in the diagonal indicates no movement meaning that the number and percent of households remain in the same poverty score band in the baseline 2016 and endline survey 2020. Those households above the diagonal indicate the number and percent of households moving from low poverty score bands to higher poverty score bands in the current survey. Those below the diagonal depict number and percent of households moving to lower bands of poverty in the current survey.

Table 3

Movement of Household in Different Poverty Score Bands Over the Baseline – Number and % of Households Getting CIF

Baseline (2016)		Endline (2020)						Grand Total
		0 – 11	12—18	19 – 23	24 – 34	35 – 59	60 – 100	
Poverty Score Distribution Baseline 2016	0 – 11	131 (39.7)	119(36.1)	40 (12.1)	30 (9.1)	10 (3)	0	330 (16.3)
	12—18	228 (24.8)	313(34)	201 (21.8)	149 (16.2)	29 (3.2)	0	920 (45.6)
	19 – 23	110(14.4)	226 (29.5)	168 (22)	214 (28)	45 (5.9)	2 (0.3)	765 (37.9)
	24 – 34	0	0	0	0	0	0	0
	35 – 59	0	0	0	0	0	0	0
	60– 100	0	0	0	0	0	0	0
	Grand Total	469 (23.3)	658(32.7)	409 (20.3)	393 (19.5)	84(4.2)	2(0.1)	2015 (100)

Note: Figures in parentheses are percentages.

Source: CIF & IGG Survey, 2020, RSPN and CDPP

The cross-tabulation illustrates the dynamic and multi-dimensional nature of poverty. The results show that at the time of baseline 330 households were in the poverty score band of (0-11), whereas in the current survey 39.7% percent of them remained in the same band, 36.1% moved to the poverty score band of (12-18), 12.1% moved to (19-23), 9.1% moved to (24-34) and 3% moved to the higher poverty score band of (35-59) implying reduced poverty levels after using CIF loans. Notably, out of

920 beneficiary households, 21.8%,16.2%, and 3.2% who were in the poverty band of 12-18 in the base year 2016 moved to a higher poverty band of 19-23, 24-34, and 35-59 respectively in the endline survey, 2020. Similarly, out of 765 beneficiary households, 28%, 5.9%, and 0.3% who were in the poverty band of 19-23 in the base year moved to higher poverty band of 24-34, 35-59, and 60-100 respectively in the current survey, 2020. In contrast to this, out of 765 beneficiary households, 14.4% and 29.5% who were in the relatively higher poverty band of 19-23 in the base year moved to the lower poverty bands of 0-11 and 12-18, respectively in the endline survey, 2020.

Table 4 reports cross-tabulation on the movement of the IGG beneficiary households in different poverty score bands over the baseline in terms of number and % of households. The results show that at the time of baseline 1468 beneficiary households were in the poverty score band of (0-11), whereas in the current survey 48.9% percent of them remained in the same band, 33.3% moved to the poverty score band of (12-18), 10.2% moved to (19-23), 6.8% moved to (24-34), and 0.7% moved to the higher poverty score band of (35-59) implying reduced poverty levels after using IGG grants. However, no household moved to the highest poverty band (60-100).

More significantly, out of 312 beneficiary households, 14.4%, 9.9%, and 1% who were in the poverty band of 12-18 in the base year 2016 moved to a higher poverty band of 19-23, 24-34, and 35-59 respectively in the current survey, 2020. Similarly, out of 228 beneficiary households, 14.9%and 3.9% who were in the poverty band of 19-23 in the base year moved to higher poverty band of 24-34, and 35-59 respectively in the current survey, 2020 whereas, no household moved to the highest poverty band (60-100). In contrast to this, out of 228 beneficiary households, 26.3% and 32.5% who were in a relatively higher poverty band of 19-23 in the base year moved to the lower poverty bands of 0-11 and 12-18, respectively in the current survey, 2020.

Table 4

Movement of Household in Different Poverty Score Bands Over the Baseline – Number and % of Households Getting IGG

		Poverty Score Distribution Endline 2020						
Baseline		**0 – 11**	**12 — 18**	**19 – 23**	**24 – 34**	**35 - 59**	**60 – 100**	Grand Total
Poverty Score Distribution Baseline 2016	**0 – 11**	718 (48.9)	489 (33.3)	150 (10.2)	100 (6.8)	11 (0.7)	0	1468 (73.1)
	12 — 18	111 (35.6)	122 (39.1)	45 (14.4)	31(9.9)	3 (1)	0	312 (15.5)
	19 – 23	60 (26.3)	74 (32.5)	51 (22.4)	34 (14.9)	9 (3.9)	0	228 (11.3)
	24 – 34	0	0	0	0	0	0	0
	35 – 59	0	0	0	0	0	0	0
	60 – 100	0	0	0	0	0	0	0
	Grand Total	889 (44.3)	685 (34.1)	246 (12.3)	165 (8.2)	23 (1.1)	0	2008 (100)

Note: Figures in parentheses are percentages.

Source: CIF & IGG Survey, 2020, RSPN and CDPP

5.3   Cost Effectiveness of CIF

CIF is run by local community institutions and considered to be low cost in comparison to microfinance institutions as the institutional overhead of Community Organisations (COs) are low compared with government and other financial institutions, including microfinance. **Table 5** reports data on service charges per loan in order to get approval of CIF. Service charge on CIF varies in

SUCCESS programme districts ranging from lowest service charge at PKR 368 per loan in Matiari to the highest at PKR 2028 per loan in Jamshoro. On average, the official service charge is found to be at PKR884 per loan for a sample of 4023 women beneficiaries in eight districts. Considering this average service charge for an average loan size of PKR20,000, the cost of a CIF loan turned out to be around 4.4%per annum in terms of interest charged to the borrowers which is very low as compared with other sources of finance like Microfinance Banks (MFB) in Pakistan whose interest rates are around[4] 25-33% per annum.

The interest rate charged by the informal lenders is much higher up to 80% than other formal sources. This validates the hypothesis that CIF provides cost effective financial access to the poorest and poor households. Informal credit market in Pakistan is characterized by exorbitantly high interest rates and rapid disbursement of credit. It happened to be the major source of rural credit. The interest rate charged by the informal lenders is much higher up to 80% than other formal sources. The inability of formal credit institutions to reach the poor results in dependence of the poor on the informal market. In an exploitative environment where the poor are charged with a very high interest rate, CIF as an alternative source of finance might play an important role in the elimination of exploitation by informal lenders that can result in higher poverty reducing impact as compared to conventional sources of finance.

Table 5

Service charges to get approval of CIF loan (PKR)

Districts	Mean
Dadu	1509
Jamshoro	2028
KSK	523
Larkana	389
Matiari	368
Sujawal	392
TAY	603
TMK	448
Total	884

Source: CIF & IGG Survey, RSPN and CDPP, 2020

6   Conclusions and Policy Recommendations

The paper examined the impact of financial inclusion through community investment funds on poverty alleviation in Rural Sindh of Pakistan. The design of the research was to measure the overall impact of CIF and IGG intervention via changes in poverty scorecard using a 'before and after' approach.

The findings suggest that financial inclusion through community investment funds has impacted the poor households positively by improvement in the poverty scorecard. For CIF beneficiary households, the poverty scorecard, on average increased from 16.34 in baseline 2016 to 17.97 in the current survey 2020 indicating a reduction in extent of poverty or graduating from the lower poverty scorecard to higher level among the CIF beneficiary households in rural Sindh of Pakistan. Clearly, a higher proportion of CIF beneficiary households graduated and moved from lower poverty bands to higher poverty bands implying reduced poverty levels after using CIF loans.

In a similar way, the poverty scorecard of IGG beneficiary households increased from 9.39 in baseline 2016 to 13.16 in the current survey 2020. Results are statistically significant at the 5% level validating

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[4] See State of Micro Finance in Pakistan, 2018 Akhuwat.

the hypothesis that access to and utilization of capital improves the poverty score of beneficiary households. These results are in line with the mounting evidence that inclusion of previously excluded groups, especially women, alleviates poverty by providing them with financial resources at an affordable rate (Bold, et al., 2012; Chibba, 2009; Kpodar & Andrianaivo; 2011, Neaime & Gaysset; 2018; Sarma & Pais, 2011). They also conform with earlier studies conducted in the area (RSPN 2012a, RSPN 2012b),

More importantly, the cross-tabulation of poverty score band analysis suggests that out of 920 beneficiary households, 21.8%,16.2%, and 3.2% who were in the poverty band of 12-18 in 2016 moved to a higher poverty band of 19-23, 24-34, and 35-59 respectively in 2020 suggesting an improvement in their poverty status. Similarly, out of 1468 IGG beneficiary households with poverty score band (0-11) in 2016, 48.9% of them remained in the same band in 2020, 33.3% moved to the poverty score band of (12-18), 10.2% moved to (19-23), 6.8% moved to (24-34), and 0.7% moved to the higher poverty score band of (35-59) in 2020.

Compared to conventional sources of finance like Microfinance Banks (MFBs), CIF loan appears to be largely cost effective. The CIF service charges are very low at 4.4% per annum compared with amount charges on loan by other sources of finance like MFBs in Pakistan where interest rates are charged in the range of 20-25% per annum. Thus, results validate the hypothesis that CIF provides cost effective financial access to poor households. It is, therefore, recommended to increase the coverage of the poor segments of populating through CIF in backward and remote areas where poverty still remains chronic.

Policy implication: The broader policy implication of a positive impact of CIF and IGG on poverty levels of the poor households coupled with cost effectiveness of the approach emphasises that given the limited available resources with the government and foreign donors, the provision of financial access to the poor via CIF, IGG with community mobilisation approach should be the corner-stone of the country's poverty reduction strategy.

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ANNEX I

Table A1
Distribution of CIF Loan by Type

Districts	Agriculture Count	%age	Enterprise Count	%age	Karobari Sarmaya Count	%age	Livestock Count	%age	Tajarat Count	%age	Total
Dadu	1,148	13%	1,966	22%	26	0%	5,656	64%	1	0%	8,797
Jamshoro	407	9%	955	22%	3	0%	3,013	69%			4,378
KSK	4,041	21%	1,083	6%	15	0%	14,443	74%			19,582
Larkana	476	5%	488	5%	45	0%	9,536	90%			10,545
Matiari		0%	239	5%		0%	4,958	95%			5,197
Sujawal	1	0%	266	4%		0%	6,749	96%			7,016
TAY		0%	86	1%		0%	7,315	99%			7,401
TMK	1	0%	417	12%		0%	2,972	88%			3,390
Total	6,074	9%	5,500	8%	89	0%	54,642	82%	1	0%	66,306

Source: CIF & IGG Survey, 2021, CDPP

Table A2

CIF Sample Allocation By District and By Loan Type

Districts	Adjusted Sample Allocation	Agriculture	Enterprise	Live Stock	Number of SSU LSO @20 HH Sample	Number of PSU VO @10 HH Sample
Dado	300	100	100	100	15	30
Jamshoro	300	100	100	100	15	30
KamberShahdadkot	400	100	100	200	20	40
Larkana	400	100	100	200	20	40
Matiari	150	0	0	150	8	15
Sujawal	150	0	0	150	8	15
Tando Allahyar	150	0	0	150	8	15
Tando Muhammad Khan	150	0	0	150	8	15
Grand Total	2,000	400	400	1200	100	200

Source: CIF & IGG Survey, 2021, CDPP

Table A3
Distribution of IGG Loan by Type

Districts	Agriculture Count	%age	Enterprise Count	%age	Live Stock Count	%age	Total
Dadu	222	4%	908	16%	4,553	80%	5,683
Jamshoro	32	2%	418	20%	1,606	78%	2,056
KambarShahdadkot	421	15%	220	8%	2,250	78%	2,891
Larkana	52	1%	161	4%	3,646	94%	3,859
Matiari	1	0%	2	0%	2,052	100%	2,055
Sujawal	7	0%	49	1%	4,700	99%	4,756
Tando Allahyar	1	0%	2	0%	2,639	100%	2,642
Tando Muhammad Khan	1	0%	22	1%	1,447	98%	1,470
Grand Total	737	3%	1,782	7%	22,893	90%	25,412

Source: CIF & IGG Survey, 2020, CDPP

Table A4
IGG Sample Allocation by District and By Loan Type

Districts	Adjusted Sample Allocation	Agriculture	Enterprise	Live Stock	No. of SSU LSO @20 HH	No. of PSU VO @10 HH
Dadu	400	150	100	150	20	40
Jamshoro	250	0	100	150	13	25
KambarShahdadkot	450	200	100	150	23	46
Larkana	300	50	100	150	15	30
Matiari	150	0	0	150	8	15
Sujawal	150	0	0	150	8	15
Tando Allahyar	150	0	0	150	8	15
Tando Muhammad Khan	150	0	0	150	8	15
Grand Total	2,000	400	400	1,200	100	200

Source: CIF & IGG Survey, 2021, CDPP

ANNEX II

Poverty Scorecard test of significance for difference of PSC of CIF beneficiaries between baseline 2016 and Current Survey, 2020

Paired Samples Test

	Paired Differences			95% Confidence Interval of the Difference				Sig. (2-tailed)
	Mean	**Std. Deviation**	**Std. Error Mean**	**Lower**	**Upper**	**t**	**df**	
Pair 1 Poverty Score (Endline) - Poverty Score Baseline	1.62680	8.87616	.19774	1.23901	2.01459	8.227	2014	.000

Poverty Scorecard test of significance for difference of PSC Band PSC of IGG beneficiaries between baseline 2016 and Current Survey, 2020

Paired Samples Test

	Paired Differences			95% Confidence Interval of the Difference				Sig. (2-tailed)
	Mean	**Std. Deviation**	**Std. Error Mean**	**Lower**	**Upper**	**t**	**df**	
Pair 1 Poverty Score (Endline) - Poverty Score Baseline	3.77789	8.22349	.18352	3.41799	4.13779	20.586	2007	.000