The Design of Social Protection Programs for the Poor: In-Kind Asset Transfers versus Unconditional Cash Transfers

Design of Social Protection Programs: How to get it right?

Over 40 million people in Pakistan live below the national poverty line. Social protection programs are vital to the fight against poverty, often designed to promote entrepreneurship and encourage a shift from low-paid wage labour towards self-employment. This is particularly the case now as the country grows out of the pandemic. Programs can take the form of unconditional cash transfers (UCT) or in-kind transfers of assets and/or skills. Indeed, the government of Pakistan currently finances an income supplementing program, the Benazir Income Support Program (BISP), whilst simultaneously facilitating asset and skill transfer programs and microloans.

Cash transfers are easy to implement and allow beneficiaries to tailor their choices to their needs, which they know best. Counter to these positives, informal taxation is more likely as is the temptation to finance consumption.

This underlines the need for rigorous evidence on the relative effectiveness of in-kind asset transfers versus unconditional cash transfers. We examine whether households do no worse with cash relative to in-kind transfers, as standard economic theory predicts under a tight set of conditions. Where outcomes do diverge across transfer types, we furthermore explore whether this relates to market imperfections or to behavioural or psychological factors causing households to treat cash and in-kind transfers differently. We evaluate these questions using a large-scale randomized control trial (RCT), comparing the classic Targeting the Ultra Poor (TUP) asset transfer design[1] to a modified program offering beneficiaries the choice of cash instead of an asset-skills bundle.

This work is among the first to compare in-kind asset transfers and UCTs in the same setting. Our experimental research design and data collection allow us to determine underlying demand for UCTs over in-kind transfers and estimate the impact of both on outcomes such as labour productivity, income generation, earnings, consumption and asset holdings. A second novel aspect of this research is our supply-side data on livestock and other markets, enabling us to study the nature of market failures that may impact rates of return to programs. We expect our results to inform the design of social protection programs for the poor, but also to foster research into the market failures creating extreme poverty in the first place.

Project Design

The Asset Transfer Program is a regional poverty alleviation development intervention, and is implemented in four poor districts of southern Punjab: Bahawalpur, Muzaffargarh, Lodhran and Bahawalnagar. The project is led by the Centre for Economic Research in Pakistan (CERP) in partnership with the Pakistan Poverty Alleviation Fund (PPAF).

The Program is based on a sample of 19,000 households chosen from 103 randomly selected *mouzzas*[2] in the four Program districts, of which 58 *mouzzas* serve as our **Treatment Group**. We subdivide this into Treatment 1 villages, where households received PPAF's asset transfer + training program, and Treatment

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[1] A classic TUP Program provides a one-off large asset transfer (typically livestock) combined with complementary training.

[2] M*ouzzas* are administrative sub-districts; the term refers to all revenue villages in the *mouzzas* instead of specific blocks within these.

2 villages, where households could choose between either an asset transfer plus training program OR an equivalent unconditional cash grant. The remaining 45 *mouzzas* received nothing, serving as our **Control Group**. Social mobilization was carried out in all 103 villages through the formation of community and village organizations. These were also used as a vehicle for the transfers. Figure 1 shows the location of the sample villages in the four districts.
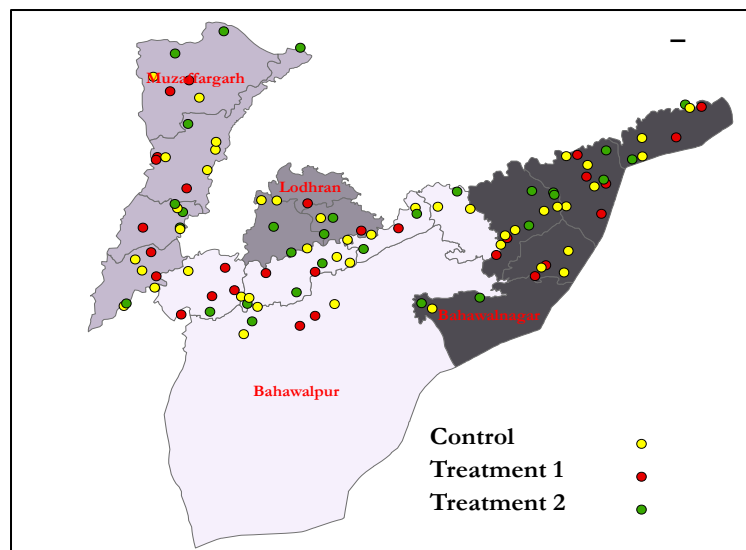

Figure 1: Map of Sample Villages

The intervention was completed in mid-2014, with 1,832 ultra poor households receiving one of the two treatments. In order to measure the program's short-term impact, two follow-up tracker surveys were conducted 4 and 8 months after transfers were made. Longer and more in-depth midline surveys were conducted one, two and four years after the intervention.

Beneficiary Identification and Selection

Households were ranked using the BISP poverty score card. Treatment was then awarded to a random subsample of households classified as ultra poor in each treatment village. Balance checks were conducted to confirm successful randomisation of the interventions across villages.

Treatment Groups

In the first treatment arm, eligible households were presented a menu of assets from which they could choose any combination up to a value of PKR 50,000. The list was based on market research conducted at the village and union council level. Figure 2 displays a sample asset list. In addition, beneficiaries were offered at least two trainings; the first dealt with the management of business enterprise (Enterprise Development Training), whereas the second focused on technical knowledge of a specific asset (Asset Management Training/Technical Training). The two treatment arms differ only in the additional item included in the second treatment: an equivalent amount of unconditional cash transfer of PKR 50,000. Households selecting cash did not undergo training, instead receiving an additional unconditional cash transfer of PKR 12,000.

Livestock	Retail	Crop farming	Non-livestock production
Goat raising (one goat - 15k)	Grocery shop (material up to 50k)	Cultivation of cotton (seeds 20k + fertilizer 15k)	Tailoring (sewing machine 6k + table 4k)
Dairy farming (one cow - 48K)	Fruit stall (stall 5k + fruit up to 45k)	Pesticides - 50k	
Calf rearing (one calf - 25k)	General store - 50k		
Fodder - 50k	Barber shop - 35k		
Veterinary medical store - 50k	Carpenter shop - 30k		
Animal breeding shop - 40k	Cycle repairing shop - 35k		

Figure 2: Example Village Asset List

Figure 3 shows the proportion of households that chose an asset for the first and second treatment arm, respectively. It reveals a strong preference for the UCT where this option was available to households in Treatment 2, with productive livestock assets otherwise being the dominant choice in Treatment 1.
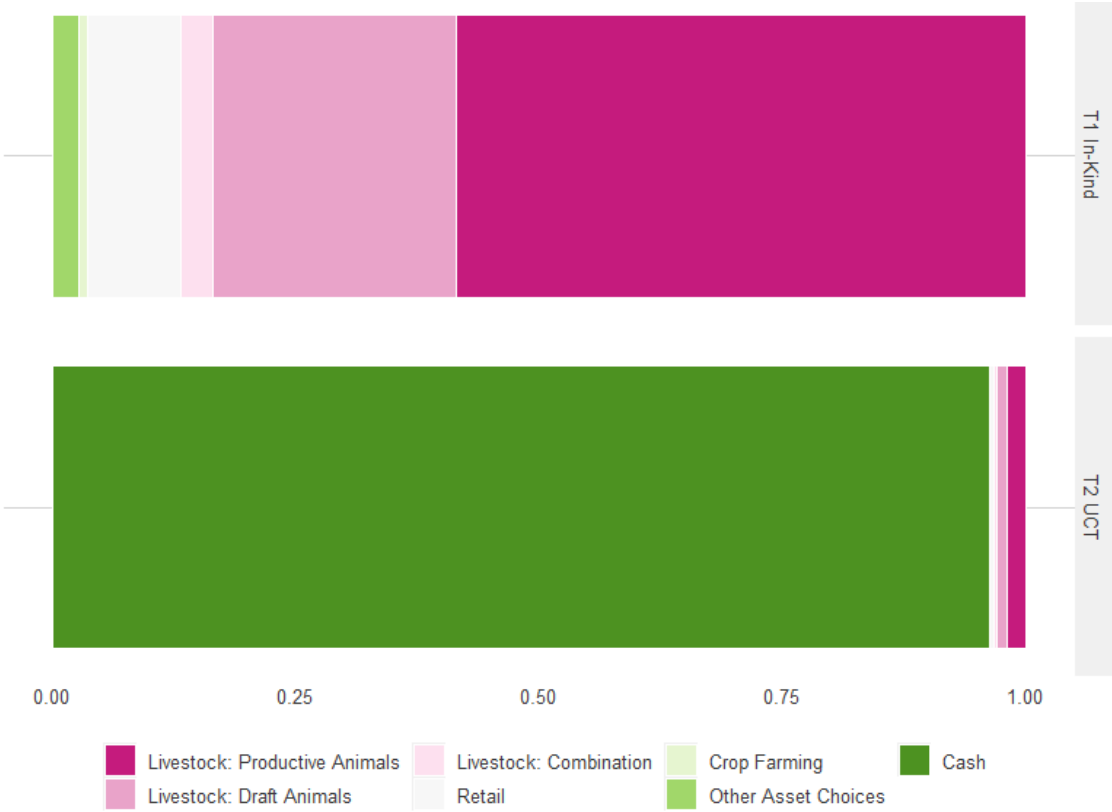

Figure 3: Asset Choice

Results & Outcomes

Our relevant sample is the 3,375 ultra-poor households covered in the tracker, baseline, midline and endline surveys. This encompasses all treated households from treatment villages and a sample of poor households from control villages. To assess the impact of the treatments, we compare the post-treatment average of key household indicators in each treatment group with the control group. Here, we control for pre-treatment (baseline) levels of the respective indicator, except where this data was unavailable, a vector of household characteristics and strata fixed effects.[3] The results presented below are preliminary, with a more in-depth analysis still underway.

Asset Retention

The unconditional nature of the transfer meant that it was not incumbent on beneficiaries to retain the asset, and they could sell it if they chose. Some transferred assets were also lost or stolen. Figure 4 demonstrates that, for most asset types, while the rate of retention fell between subsequent surveys, the bulk of households retained productive livestock assets, which were the most popular choice among those who received an asset.
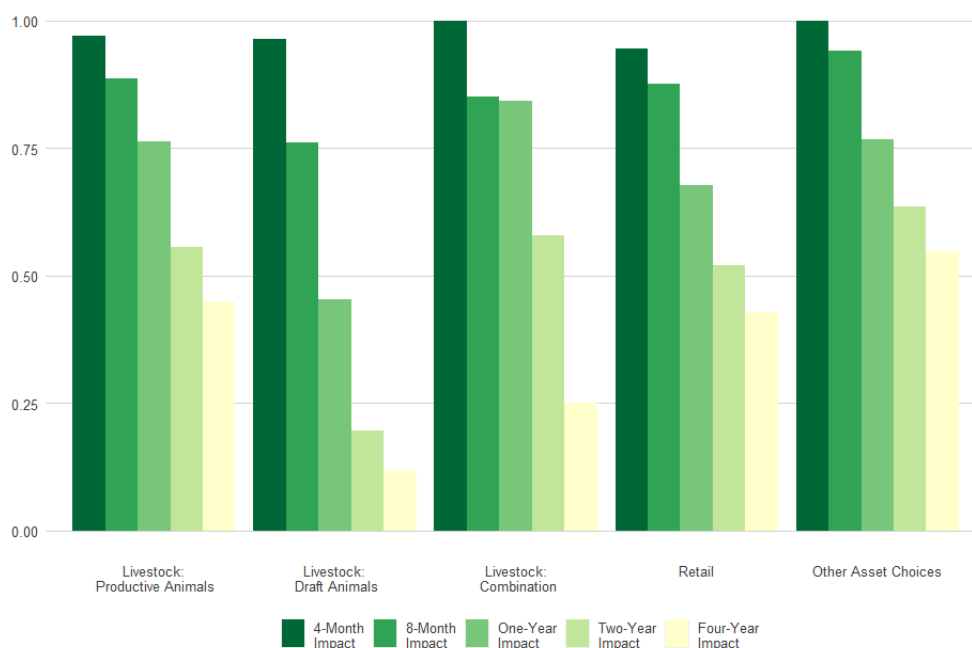

Figure 4: Individual Asset Retention

Occupational Responses to Treatment

Figure 5 displays OLS regression results for different occupational choices for the household head and spouse. We observe a decline in unemployment rates sustained over four years post intervention, and an occupational shift from casual wage labour to self-employment. The reduction in unemployment is particularly pronounced for women. This is consistent with the asset transfer having removed a significant barrier to entry for low-income households, who show that they have the ability to set up and run their

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[3] Strata are defined on the basis of geographic location and village size and divide the sample of 103 villages into four groups.

livestock businesses. Some households who received cash also used this transfer to enter livestock-related businesses. These results furthermore indicate that the shift towards self-employment is more pronounced in the asset-skill arm relative to cash, implying asset-skill bundles may be more likely to encourage entrepreneurship.
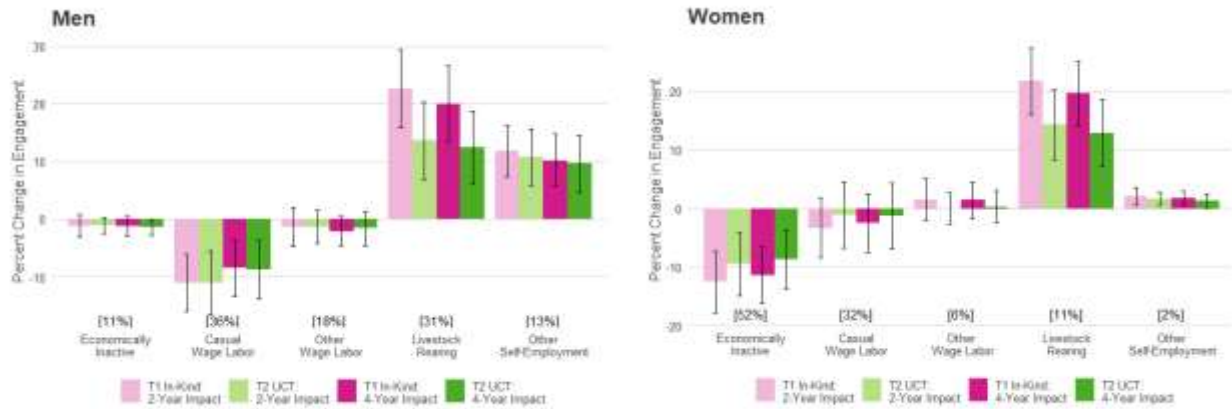

Figure 5: Extensive Margin Labour Market Activity[4]

Figure 6 moreover documents an increase in number of hours spent in any employed activity at the household level. The increase is more pronounced for women, given their relatively low baseline labour force participation rates combined with the substantial impact of the program. For male household heads, time investment in employment is statistically significantly higher for those receiving in-kind assets.
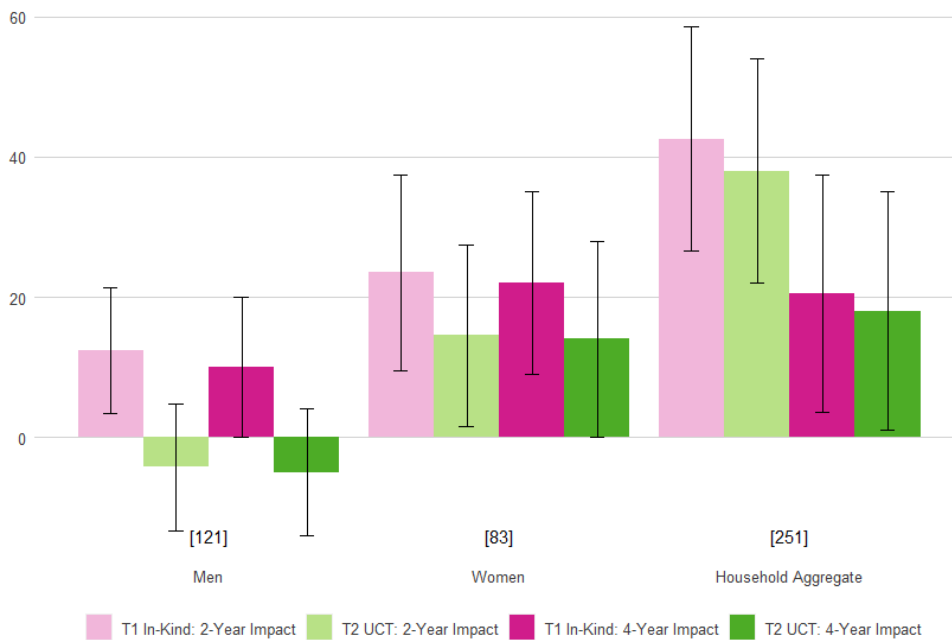

Figure 6: Intensive Margin Labour Market Activity[4]

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[4] Figures in brackets represent baseline mean percentages of occupational engagement.

Impact on Household Income

The occupational changes observed result in an aggregate increase in monthly earned income, as shown in figure 7. Both interventions resulted in a significant increase in monthly employment earnings of between 10 and 20%, both after 2 and 4 years relative to the control group.
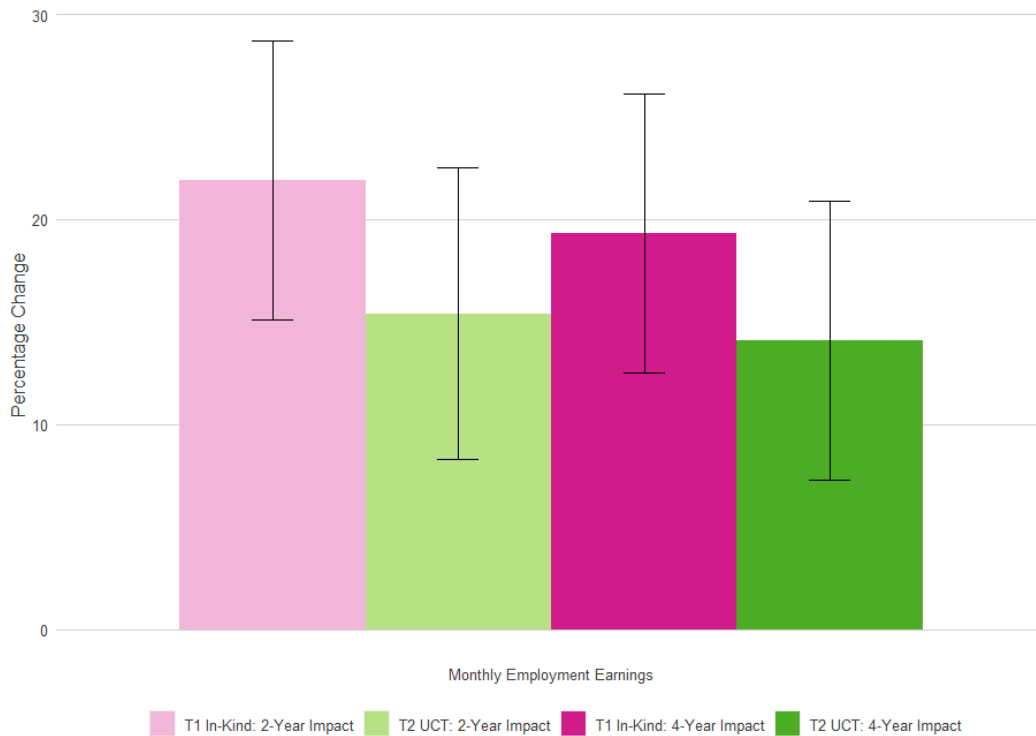

Figure 7: Household Income

Impact on Household Expenditure Patterns

Figures 8A and 8B consider household expenditures on consumption, savings and investment. Consumption is a key indicator for any poverty alleviation program, but sustained increases tend to take some time to materialize, especially if beneficiaries save to finance further investment. Figure 8A shows that both food and non-food consumption were higher in the treatment arms two and four years post-intervention.[5] However, results are not statistically different across treatment arms, implying households have similar short-term consumption patterns irrespective of whether they received the asset or cash transfer.

Savings represents another important outcome for our intervention, as initial cash transfers or early sale of transferred assets may have a positive effect on savings. On the other hand, households trying to

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[5] Food consumption includes cereal grains, meat, vegetables, dairy, oils, major condiments and meals away from home or bought for visitors. Non-food consumption includes expenditure on fuel, cosmetics, toiletries, entertainment, transportation, electricity, maid salary, clothing, footwear, utensils, furniture, household textiles, legal matters, education, dowry, rituals, and others. Consumption is measured in per-adult equivalent terms using the OECD scale: 1+ (0.7*number of adults - 1) + (0.5*number of children).

expand business activities may feed investment requirements from existing savings. Figure 8B documents a significant increase in savings for both treatment arms relative to the control group. Once again, however, differences across treatment arms are not statistically significant. Figure 8B also shows an encouraging increase in investment among treatment households, suggesting the program is achieving its intended entrepreneurial effect. In the long-run, this may in turn translate into an increase in household earnings and consumption.
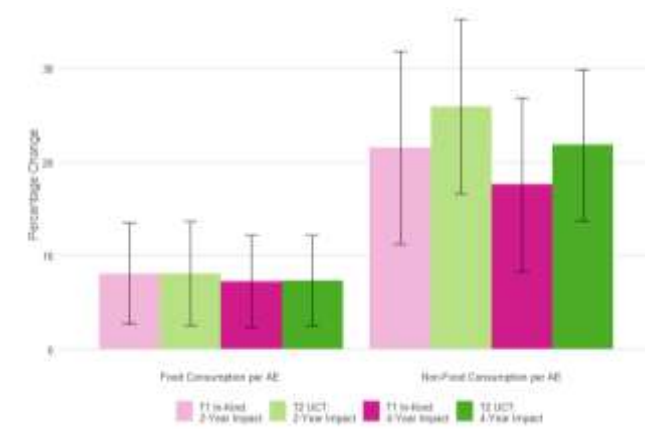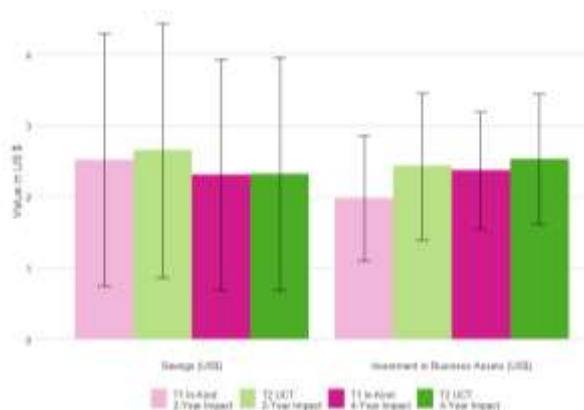

Figure 8A: Household Consumption   *Figure 8B: Savings and Investment*

Conclusion

Our preliminary findings from the first five follow-up surveys have revealed a significant shift out of wage employment and into self-employment, one of the program's central objectives, with transferred assets having been largely retained. This has translated into an increase in earnings from self-employment particularly in livestock related businesses. These results are consistent with households having overcome any delay in income growth as they developed expertise in managing their respective transferred assets, and with households having been diverted away from previous employment in low-paid wage labor. We also observe an increase in earnings in both treatment arms.

Finally, though consumption, savings and business investment have all increased, no statistically significant differences were detected across treatment arms. Whether such differences emerge down the line will be an important question for our future analysis. Moving forward, we also plan to examine heterogeneous impacts by market access characteristics and household and preference/psychological differences. We will furthermore look more closely at village-wide and supply-side impacts as well as early childhood development indicators. The results that will continue to emerge from this study are more relevant than ever as we assess how social protection programs can help to maintain households' economic resilience in the face of the global pandemic. Indeed, the question of the contributions that asset and cash transfer programs can make to the eradication of poverty in Pakistan has never been more important. These initial results indicate that both approaches show some promise but more data collection and analysis is needed to uncover their relative contributions and the mechanisms involved.