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The Impact of Seasonal Credit on Agricultural Production and Remittances

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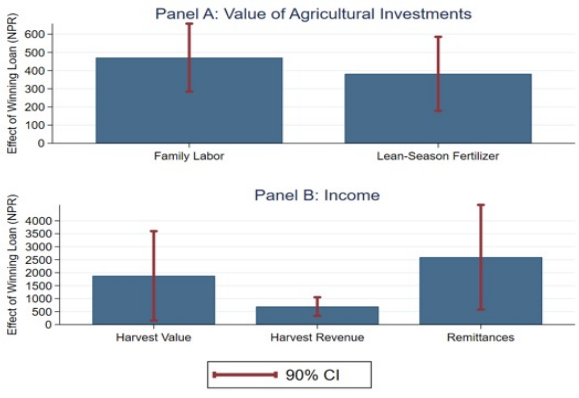
Topic at a Glance

Globally, hundreds of millions of people suffer not just from chronic poverty, but also acute hardships during particular times of the year. These "lean seasons" commonly occur in rural communities in between the planting and harvest seasons, when stores from the last harvest run out and there is little agricultural work locally. Lean-season migration can help households cope with seasonal poverty by providing an additional income source when labor demand in agriculture is low. All-else equal, migration will be most effective at reducing seasonal poverty when migrants can easily remit their earnings during the lean season, either digitally or by hand.

We study the effect of a seasonal loan program that offered small loans timed to the lean season to households engaged in agriculture and circular labor migration in Nepal. We see evidence to remittance constraints in our sample: roughly two thirds of households engage in circular migration, over half of remittances are brought back by hand, and remittances rise sharply after the lean season when most migrants return. We designed our intervention to let households access future harvest and remittance income during the lean season when it is more valuable. We find that seasonal loans improve measures of lean season welfare and increase agricultural investment. The agricultural investments result in increased harvest revenue, and households offered the loan receive more remittances throughout the study period.



New Insights

Intervention

Our intervention was designed to allow households to finance their consumption and investments during the lean season using future harvest and remittance income. Loans were offered in August, roughly the middle of the lean season, and were repaid in December, roughly a month after the rice harvest and the return of most labor migrants.

The intervention was implemented by BASE, an NGO that operates in Western Nepal, in the Western Terai districts of Kailali and Kanchanpur. Rural households in 90 villages were eligible for the program if they were in the bottom half of the local wealth distribution as assessed by a participatory wealth ranking exercise and engaged in either rice farming or labor migration during the summer season. Half of the villages were randomly assigned to receive the loan program (treatment villages) and half did not receive the program (control villages). Within treatment villages, a public lottery was held where half of loan seekers were selected to receive the loan (lottery winners), and half were not (lottery losers). Roughly two thirds of eligible households in treatment villages applied for loans and participated in the lottery, resulting in 631 lottery winners and 614 lottery losers in our sample. Loans were 10,000 NPR (around $90 USD) and without interest.

One important implication of this design is that there are at least two ways we can estimate the effect of program: by comparing lottery winners and lottery losers, or by comparing treated villages to control villages. If lottery losers in treatment villages are unaffected by the program (there are no local spillovers) we would expect these two analysis to give similar conclusions. Consistent with a lack of spillovers, all of the results we describe here are similar for both types of comparisons. However, the comparison of lottery winners to lottery losers has a clearer interpretation because it does not include households that did not seek or receive the loan in the "treatment" group. We therefore focus on the difference between lottery winners and losers in the rest of this brief.

Impact of Loans on Agricultural Investments

We conducted five rounds of surveys with households in September, October, November and December that included questions on the migration, remittances, and labor of all household members. Select rounds also asked about agricultural investments and agricultural outcomes.

Impact of Loans on Income

Panel B of our figure shows the effects of winning the loan lottery on agricultural income and remittances. The value of harvested rice increases 9% by 1,880 NPR at constant prices. Although a minority of households sell rice at baseline, average revenues from rice sales increase by 690 NPR. Finally, we see that the average total value of remittances received over our study period increase by around 2,600 NPR, a 20% increase.

Panel A of our figure shows the effects winning the loan lottery on two types of agricultural investments during the rice season. Households that received loans invested roughly 4.5 additional hours per week of family labor on their farm, which if valued at the average wage in our sample implies 470 NPR invested. In addition, they invested an additional 380 NPR on nitrogen fertilizer during the lean season.

Policy Recommendations

We believe there are at least two clear implications of this work. First, we add to existing evidence that lean season liquidity constraints prevent productive investments during that time. Second, our evidence suggests that improving households' ability to access remittance income during the lean season could reduce this problem.

The effect of seasonal loans on agricultural productivity has a clear mechanism through credit constraints and investment. The mechanism behind the effect on remittances may seem less clear. Why would we expect post-harvest remittances to increase due to lean-season credit? This result makes sense if we believe there are binding constraints to remitting during the lean season for some migrants. In this case, the loan allows households to spend remittance income several months earlier, during a time when liquidity is low and the income is most valuable. If migrants face some tradeoffs that allow them to remit more – working more days or longer hours, spending less on housing or travel costs – they will choose to remit more when remittances can be used for food and fertilizer in the lean season.

While our specific intervention to relax liquidity constraints relied on a seasonal micro-loan, it is unclear this is the most cost-effective solution. The administrative costs of delivering these loans is high. Our results suggest that alternatives policies that focus on reducing barriers to remitting during the lean season could have similar impacts. Such policies could include improving access to digital remittance technology, helping migrants understand the process of remitting through banks in India, or reducing administrative barriers to using Indian banks.

Limitations

This research is limited by the fact that we do not directly observe many of the choices migrants make in destinations that affect remittances. Future work would improve on this by carefully measuring hours worked, housing and travel costs of migrants and how relaxing remittance constraints influences these choices.

A second limitation is that while our results point strongly to remittance constraints being important, we do not directly target remittances with our intervention. Our seasonal loan impacts many variables, and future work could potentially improve from both a research and cost-effectiveness standpoint by implementing programs that directly focus on reducing barriers to remittances.

Read more → g2lm-lic.iza.org/projects/ta4/seasonal-migration-and-agricultural-labor-markets-in-nepal/

G²LM|LIC is a joint program by IZA and the UK Foreign, Commonwealth & Development Office (FCDO) – improving worldwide knowledge on labor market issues in low-income countries (LICs) and providing a solid basis for capacity building and development of future labor market policies.

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