



# No Lean Season

## Encouraging Seasonal Migration to Address Income Insecurity

PHOTO: EVIDENCE ACTION

Three hundred million of the world's rural poor suffer from seasonal income insecurity, which often occurs between planting and harvest when the demand for agricultural labor falls and the price of food rises.<sup>1</sup> Those who undergo a lean season typically miss meals for a two- to three-month period. This is especially problematic for pregnant women and young children since poor nutrition for even a short time can limit long-term cognitive and physical development. Seasonal hunger and deprivation is perhaps the biggest challenge to the reduction of global poverty that has remained largely under the radar.

Members of some families in poor rural areas migrate to urban areas for work to cope with seasonal deprivation. In Bangladesh, however, researchers observed that many vulnerable households, who could potentially reap large benefits from temporary migration, didn't send anyone away to work, thereby risking hunger. Why weren't more people migrating? Would these households improve food security if they were to send a migrant to these areas during the lean season? More broadly, why were so many people sticking around in relatively unproductive rural areas, in the face of persistent gaps in wages and productivity between urban and rural areas? Was this akin to the proverbial \$100 bills being left on the sidewalk?

A research team from Yale University, the London School of Economics, the University of Sydney, and Innovations for Poverty Action investigated these questions in Northern Bangladesh during 2008-2011, testing whether providing information or small financial incentives, worth about the cost of a bus ticket, increased migration and in turn, improved household welfare. They found that households offered either a grant or loan to migrate were substantially more likely to send someone to work outside the village during the lean season, and those families increased caloric intake relative to those not offered the incentives. Many of those households chose to re-migrate on their own a year later. A replication

### Key Findings

Providing an incentive to households to send a seasonal migrant had the following impacts<sup>2</sup>:

- » **30-35 percent increase in food and non-food expenditures** for households who accepted the incentive and sent a migrant.
- » **550-700 more calories consumed** per person per day, equivalent to an extra meal per person for households who accepted the incentive and sent a migrant.
- » As much as a **19 percent increase** in household income during the lean season for those offered an incentive in 2014.
- » An indirect "spillover benefit" of **10 percent increase in income** for poor households in those same villages **not offered an incentive**.
- » **Agricultural wages increased** in home villages due to the smaller labor supply when people moved away, indirectly benefitting poor households that remained behind.
- » Recurring migration: Households that received incentives once **were more likely to send someone to work in subsequent years** (2009, 2011, 2015), even though incentives were not offered in those years.
- » Financial incentives induced migration, but information provision by itself did not.

and expansion of the study during 2014-2016 not only confirmed these findings, it also showed that larger scale emigration increases wages and work hours in the village of origin, indirectly benefiting other residents who stay back.

## Context

Rice farmers in Bangladesh plant in August and harvest in January. The interval between planting and harvest is a lean season with limited job opportunities for landless households, a drop in the agricultural wage rate and an increase in the price of rice. This recurring and predictable seasonality during a period when farmers have to wait for the crop to grow can quickly translate into skipped meals and food shortages for the rural poor.

As a way to cope with this seasonal deprivation, about one-third of households in poor, rural areas of Northern Bangladesh send a family member to urban areas to find work during this period.<sup>3</sup> In towns, seasonal migrants can find temporary jobs such as rickshaw-pulling, construction, or potato-farming. While this rate is high and indicative of the relative opportunities available in cities, many households that experience seasonal hunger have not historically sent a family member to towns for temporary work.

## Evaluation: Identifying Barriers to and Effects of Migration

In 2008-2011, the research team measured the impact of information, small loans, and small cash grants on migration, food security and income. Researchers randomly assigned 100 villages (1900 households) to one of four groups:

- » **Information** (16 villages): Potential migrants received information about the types of jobs available in cities, the likelihood of getting each job, and approximate wages.
- » **Grant** (37 villages): In addition to the same job information, households in this group were offered a grant of 800 Bangladeshi taka (US\$11.50)

conditional on one member migrating. Six-hundred taka (US \$8.50, which covers the round-trip travel cost) was provided in advance with a promise of 200 taka more given once the migrant checked in at the destination.

- » **Loan** (31 villages): Same as the grant treatment, except that the 800 taka was offered as a zero interest loan with implicit limited liability, conditional on migrating.
- » **Comparison** (16 villages): Households in this group did not receive any information or incentives.

### Effects of Program on Migration Rates

The research team collected data on the migration patterns of household members during the 2008 lean season in response to the information or incentives, and also any re-migration (absent any further incentive) during the 2009 lean season and a milder lean season in 2011.<sup>4</sup> Thirty-six percent of households in the comparison group reported that at least one person migrated in 2008, the same level as the information group. In contrast, receiving the subsidy in the form of either a conditional grant or a loan had a substantial effect on the propensity to migrate: 59 percent of households offered the cash and 57 percent of households offered the loan sent a migrant in 2008.

In subsequent years, researchers found a persistently higher re-migration rate among those offered the grant or loan incentive, even absent any further subsidies. (Figure 2).

This higher migration rate among incentivized households reveals a barrier preventing poor rural households from taking advantage of seasonal migration – along with a tool for overcoming it. Notably, there is no effect in the information group, which indicates that the reluctance to migrate does not rest on the poor being misinformed about the average profitability of migrating.

FIGURE 1

### Small Grant Enables Migration

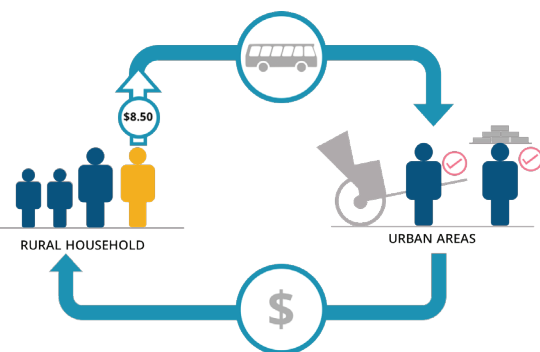
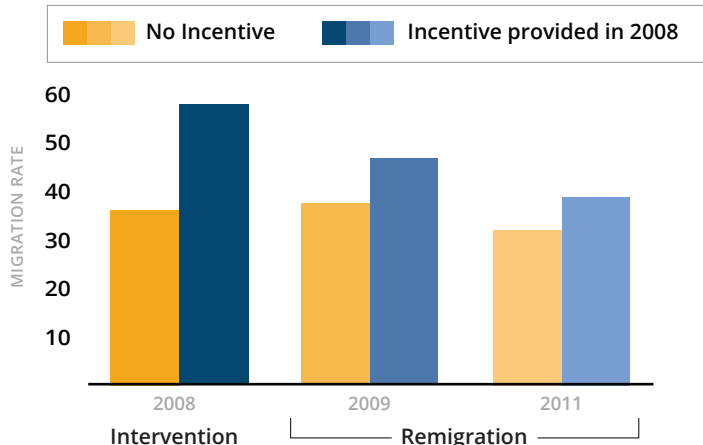


FIGURE 2

### Migration and Remigration from a one-off incentive



Rather, poverty limits households' ability to take on the risk of seasonal migration, because the failure to find work after undertaking the cost of trying it out can have devastating consequences for households living close to subsistence level.

### Impacts on Household Welfare

The seasonal migration induced by this program was highly profitable on average, producing **increases of 30-35 percent in food and non-food expenditures, and 550-700 more calories consumed** per person per day, relative to the comparison group (2008, 2009 data). This is equivalent to an extra meal per person during a period when meals are regularly skipped among the poor.

## Replication and Expansion: Testing at Scale and Examining Community-Wide Effects

In 2014, the research team conducted a second randomized evaluation in partnership with Evidence Action—a development organization committed to scaling up proven solutions to benefit millions of poor people. With an interest in delivery at scale, researchers designed an evaluation that not only re-examined the direct benefits of the approach, using new methods and outcome measures, but also explored the indirect spillover effects accruing to non-beneficiaries.

During the 2014 lean season, researchers randomly assigned 133 villages to either a comparison group (38 villages), a “low-intensity” treatment in which 10 percent of the landless population were offered a 1000 taka loan to migrate (48 villages), or a “high-intensity” treatment (47 villages) where 50 percent of the landless population was offered the same loan.

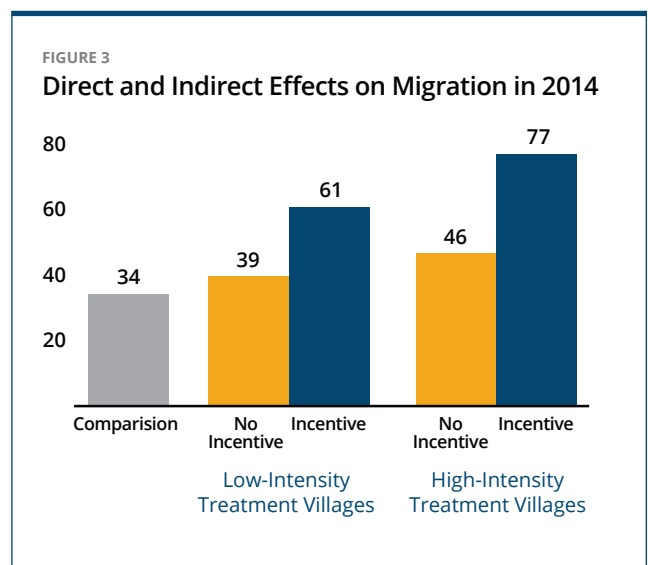
Offering the loans again led to increased seasonal migration. Each household receiving an incentive in the “high intensity” villages was 40 percentage points more likely to send a migrant than those in comparison villages (Figure 4). A household receiving that exact same incentive in “low-intensity” villages was 25 percentage points more likely to send a migrant. The higher take-up in the high-intensity villages is indicative of some benefits of coordinated travel, when many neighbors simultaneously receive offers. This benefit even reaches other residents of the high intensity villages not receiving the subsidies themselves: They become 10 percentage points more likely to send a migrant (without any incentive).

Household income increased by an average of **19 percent** during the lean season for households offered a loan in high-intensity villages, and poor households in the same village **not offered loans indirectly benefited, experiencing a 10 percent increase in income.**

Households not offered the incentives benefited in two ways. Not only were they more likely to migrate as their neighbors migrated, but those who chose not to migrate also gained from the intervention as they faced fewer competitors for the scarce jobs available locally. Through the incentives, researchers induced an additional 30 percent of households to send a migrant from high-intensity villages. This led to an **increase in available work hours** for non-migrants resident in those villages, along with an **8-9% increase in the agricultural wage rate** at home.

These direct and indirect spillover benefits persisted after a year, during the 2015 lean season. Households that had been offered migration subsidies a year before in the high-intensity villages were 29 percentage points more likely to re-migrate, and even non-offered households in those same villages were 12 percentage points more likely to re-migrate. This led to substantial increases in income earned in cities by those households.

**These results indicate that it may be more cost-effective to offer migration loans to the same number of poor households concentrated in fewer villages than thinly spread across many villages, as having a neighbor who is migrating encourages households to send a migrant as well.**



## Looking Ahead: Scaling and Adaptation

Through this research, researchers have identified a coping strategy for poor rural households, with positive impacts on income and consumption in current and future lean seasons. A relatively small transfer covering the costs of transportation and a few days of food enables rural households to seize this opportunity; without the transfer households remain too vulnerable to take on the risk of migration. Alleviating this constraint enables people looking for work to reach the location where jobs are available, creating important efficiency gains for society.

Evidence Action is working with RDRS, an NGO in Bangladesh, to bring No Lean Season to scale there from 2017-2021, directly benefiting more than 310,000 households (with 1.4 million family members) over that period.

The researchers are also exploring the applicability of offering incentives for seasonal migration in other rural contexts, and are preparing for a related evaluation in Indonesia. More broadly, they are also searching for other potential sites where this simple yet impactful solution may be tested and brought to scale.

In addition, as this program grows, policymakers and researchers are examining the potential for any negative effects of mass seasonal migration that may emerge in the future, such as a strain on urban infrastructure or a saturation of the labor market, or other unintended social consequences which could dampen the program's impacts. Researchers expect that the effect of seasonal migration on the employment prospects of the urban

## Ideal Conditions for Impact in Other Countries

Offering small incentives to migrate may improve rural livelihoods in other areas where:

- » **There is a lean season:** There are seasonal fluctuations in consumption and hunger due to agricultural crop cycles. Predictable periods of hunger indicate that existing coping and smoothing mechanisms are not adequate.
- » **Spending money on migration is risky:** There is a large population of extreme or landless poor living close to subsistence for whom it is too risky to migrate, as failing to find profitable work may have disastrous consequences.
- » **Jobs are waiting:** Cities in the region are less susceptible to agricultural cycles, and offer regular employment opportunities for low-skilled, temporary workers. Ideal target areas are at least 4-8 hours away from cities so travel cost imposes a burden.

An existing pattern of seasonal migration, even if limited to a set of villages or type of household, may be a good indicator that this approach would have positive impacts, as it shows that transportation and remittance networks exist and employment opportunities may be readily available.

poor is minimal, but have plans to explore it rigorously in 2017. They are also exploring broader socio-political effects of migration in a related study.

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**Partners:** RDRS, Evidence Action

**Study sample:**

2008-2011: 100-133 villages, 1900-2500 households;  
2014-2016: 133 villages, Intervention: 5792 households received migration subsidies in villages with a population of 36,808. Data Collection: 3606 households sampled

**Location:** Rangpur, Bangladesh

**Timeline:** 2008-2011; 2014

**Sector:** Social Protection

**Topics:** Livelihoods, Food Security

**Study Papers:**

2008-2011 study: *Econometrica*, 82(5): 1671-1748, September 2014. <http://faculty.som.yale.edu/mushfiqmobarak/papers/migration.pdf>

2014 study: <http://faculty.som.yale.edu/mushfiqmobarak/papers/migrationGE.pdf>

1. Devereux, Hauenstein and Vaitla (2009). *Seasons of Hunger: Fighting Cycles of Starvation among the World's Rural Poor*. Pluto Press.
2. These results are drawn from two evaluations, one in 2008-2011, and another in 2014.
3. Khandker, Shahidur R.; Mahmud, Wahiduddin (2012). *Seasonal Hunger and Public Policies: Evidence from Northwest Bangladesh*.
4. The milder lean season occurs in March/April and is driven by the plantation-harvest interval for a different rice variety (Boro).

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