

# Barriers to Labor Migration for the Rural Poor: Experimental Evidence from a Vocational Training Program in Bangladesh\*

ABU S. SHONCHOY,<sup>†</sup> TOMOKI FUJII,<sup>‡</sup> and SELIM RAIHAN<sup>§</sup>

February 11, 2018

## Abstract

Vocational training programs aimed at rapidly growing sectors have the potential to reduce skill gaps as well as improve income and employment possibilities. Such programs have often been unsuccessful because they are not driven by the industry demand and market linkages. Also, they do not tackle other barriers faced by trainees, such as savings and credit constraints, and the uncertainty of migration. We introduced a training “plus” program for the apparel sector jobs offered to the poor, rural households in northern Bangladesh, where we relaxed some of these constraints in a rigorous Randomized Control Trial (RCT) setting. Analyzing the program uptake demonstrated an interesting heterogeneity, where gender-specific social barriers, as well as risk and time preferences, play influential roles. Data from the follow-up surveys—six and eighteen months after the intervention—showed a statistically significant, persistent, and a large effect of the training program on employment when combined with an apprenticeship [on-the-job training (OJT)] or stipend component. We also found substantial income and remittance impacts, especially during the time of a seasonal shock, as well as a reduction in income poverty, both for the stipend and OJT groups. However, the rural household estimates—twelve months after the intervention—showed no impact on consumption poverty in the origin households.

**JEL Classification:** J62, J64, J65, O15, O18, R23.

**Keywords:** Field Experiment, On-the-job Training, Bangladesh, Garment Industry, Rural, Extreme Poor

---

\*Acknowledgement: We thank Chris Woodruff, Jonathan Morduch and the participants at the IZA—GLM—LIC Conference in Bonn (2013), Washington D.C. (2015, 2017) and Dhaka (2015), the IGC conference in Dhaka (2017), the “Making Impact Evaluation Matter” Conference Manila (2014), New York University (2017) and Sacred Heart University for their insightful comments and suggestions, as well as Md. Masudur Rahman, Md. Sujan Uddin, Israt Jahan and Sijia Xu for their excellent research assistance. We are also grateful to South Asian Network for Economic Modelling (SANEM) and Gana Unnayan Kendra (GUK) for providing great support for the study’s implementation. Financial support from the IZA—GLM—LIC (grant no. C2-RA2-238) and IDRC for this research is also gratefully acknowledged. The authors have no relevant or material financial interests that relate to the research described in this paper. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors and do not represent the views of the affiliated organization. All errors are our own.

<sup>†</sup>Corresponding Author. Address: New York University, 296 Lafayette Street, New York 10012, USA, email: parves.shonchoy@gmail.com

<sup>‡</sup>School of Economics, Singapore Management University, email: tfujii@smu.edu.sg

<sup>§</sup>Department of Economics, University of Dhaka, email: selim.raihan@gmail.com

# 1 Introduction

“*Connecting People with Jobs*” has been the catchphrase for the Active Labor Market Programs (ALMPs) in both developed and developing nations.<sup>1</sup> Particularly for developing countries, ALMPs could be effective for promoting employment and providing ways to self-sufficiency instead of social protection through safety nets. Policymakers typically engage with such programs broadly through the following three interventions: promoting more jobs (in the form of wage subsidy), organizing training programs for skills enhancement, and assistance in job search. In recent times, ALMPs have received increasing importance due to rising global unemployment and underemployment, demographic transitions, and concerns about automation. Also, a structural transformation is currently undergoing in the developing countries—a shift from traditional to modern industrial sectors (Filmer and Fox 2014)—a phenomenon observed in the past among the current industrial countries through the works of Lewis (1954).

One of the prevalent interventions under ALMPs is the vocational and technical education.<sup>2</sup> Vocational training programs have a strong footing in the development policy narrative since skilled workforce is a fundamental requirement for economic growth and development. Training programs aimed at rapidly growing sectors have the potential to reduce skill gaps and improve a firm’s productivity. Therefore, providing job training through vocational training programs is often regarded as an important policy option, especially for the youth. Such policies could also tackle concerns like poverty, seasonal fluctuation of income, and harsh working conditions of certain low-skill informal works,<sup>3</sup> since it helps the trainee to find a better and more stable job. Furthermore, unemployment and underemployment are often associated with rising inequality, growing social unrest, and overall lower well-being. In order to mitigate all these apprehensions, free or subsidized job training programs have been implemented by governments, donors, and non-profit organizations for years, to help disadvantaged youth to acquire marketable skills.

However, perhaps ironically, the impacts of such vocational training interventions have largely been modest at best, even in the developed countries,<sup>4</sup> where the institutional environment to support such programs is far more favorable than in developing nations. For example, evaluations of vocational training programs under the Job Training Partnership Act in the USA found mixed evidence on employment and earning (Bloom et al. 1997). Comparable conclusions were drawn for other similar programs such as Job Corps (Schochet et al. 2008) and public sector-sponsored training programs (LaLonde 1995) in the USA and school-to-work youth transition training

---

<sup>1</sup>For example see the following link from the Organisation for Economic Co-operation and Development (OECD): <http://www.oecd.org/employment/activation.htm>

<sup>2</sup>Popularly known as Technical and Vocational Education and Training (TVET)

<sup>3</sup>For example see the following article in the New York Times (<http://www.nytimes.com/2009/01/15/opinion/15kristof.html?mtrref=undefined&assetType=opinion>).

<sup>4</sup>For example, see Betcherman et al. (2004) in their review of 159 studies of Active Labor Market Programs (ALMP) around the world, which include training programs.

programs in seven OECD countries (Ryan 2001). Meta-analyses of various job training programs and ALMPs around the world also echoed similar findings (Card et al. 2017; Kluge et al. 2016; Fox and Kaul 2017; McKenzie 2017). However, existing studies tend to focus almost exclusively on the shortage of skills and neglect other important constraint faced by the youth. In this paper, we also find that vocational training program targeted at the poor rural unemployed youth is not very effective if the program is exclusively focused on the job skills. However, we provide empirical evidence that such a program can be highly effective once important issues like industry demand, job linkage, credit constraints, and the risks associated with migration are appropriately addressed.

We have set our experiment in Bangladesh, which is currently undergoing a rapid structural transformation. While the agricultural sector absorbs nearly half of Bangladesh’s active labor force, three-quarters of the 13 million net jobs newly created between 2003 and 2013 were generated in non-farm sectors (Bank 2013). The main contributor to these jobs is the manufacturing sector, dominated by the ready-made garment (RMG) sector that witnessed a remarkable growth in the last three decades. Besides being a significant driver of economic growth in Bangladesh (Ahmed 2009), the growth of the RMG sector is also widely regarded to have modernized the social fabrication of Bangladesh by empowering their women (Amin et al. 1998; Khosla 2009; Heath and Mobarak 2015).

A notable feature of the RMG sector is that the factories are concentrated in Dhaka and Chittagong areas, and the majority (85%) of garment workers are migrants from elsewhere in the country.<sup>5</sup> However, the distribution of the migrant workers by source region is rather unbalanced. In particular, northern Bangladesh has the lowest participation rate for workers in the garment sector in the country. This is particularly puzzling, given that the northern region is among the most poverty-stricken in Bangladesh<sup>6</sup> and suffers from river erosion during the monsoon, periodic floods, and seasonal famine-like conditions locally known as *monga* (Khandker 2012). An important policy-relevant question is: What factors prevent the poor, especially the disadvantaged youth in northern Bangladesh, from taking advantage of opportunities in the RMG sector?

Neoclassical theory suggests that access to credit can help acquire skills which can have higher returns in the labor market in the future (e.g., Becker (1962) and Schultz (1961)). Nevertheless, the constraint in access to credit and savings hinders the poor from investing in gainful investment such as skills training. Even though the training program provided by the government is highly

---

<sup>5</sup>See, paragraph 10 in p.3 of “Project Appraisal Document on a Proposed Credit”, Report No: 64619-BD, the World Bank available from <http://documents.worldbank.org/curated/en/958311468206352559/pdf/64619PADOP11400official0Use00nly090.pdf>.

<sup>6</sup>As of 2010, the poverty rates were about 11% higher in the north than in the rest of the country (World Bank et al. 2010). Latest World Bank poverty assessment of Bangladesh has mentioned Kurigram district of Rangpur division as the poorest region of Bangladesh. <http://www.worldbank.org/en/news/feature/2017/10/24/bangladesh-continues-to-reduce-poverty-but-at-slower-pace>.

subsidized, the opportunity cost of joining such a program as a full-time trainee is large. With irregular and infrequent income and lacking financial inclusivity and access to financial means, the poor typically struggle to save for profitable investment (Dupas and Robinson 2013). Local Micro Finance Institutions (MFIs), those provide microcredit in this region, do not run any credit program to acquire skills and facilitate migration. If anything, the rigid framework of classic microcredit design discourages migration (Shonchoy 2015). Moreover, migration is risky due to the attached uncertainty of the job prospects in the urban areas. Factory jobs, especially in the RMG sector, largely depend on informal referral in Bangladesh (Heath 2011). Hence lacking any reliable job-related network and financial resources, the risk of not finding a suitable job in the destination may be too high for the poor youth in northern Bangladesh, even though the potential return to migration could be substantial (Bryan et al. 2014).

To tackle the likely barriers to labor migration out of the rural areas for the unemployed poor youth, we experimentally relaxed some of these constraints to rigorously evaluate their impacts on program uptake, completion, and various other outcomes for participants. We designed a randomized field experiment with the help of a local non-governmental organization (NGO), Gana Unnayan Kendra (GUK), in 2014 that targeted poor seasonally unemployed youth from rural northern Bangladesh and provided intervention to promote formal employment in the RMG sector. The following job-related treatment arms were randomly assigned to eligible participants (along with an experimental control group): (i) day-long job-related information session (T1, “Information”); (ii) one-month long residential skill training after the information session (T2, “Training”); (iii) The training treatment plus the stipend to cover the migration cost and foregone income (T3, “Stipend”); and (iv) The stipend treatment plus an on-the-job training (OJT) program, where a one-month paid apprenticeship (internship) in a factory located in the capital city is included as a part of the training (T4, “OJT”).

On analyzing uptake rate among the training groups, we find that take-up was the highest for those offered with training and stipend. Both take-up and completion rates dropped for men when only the training treatment (T2) was offered. On the contrary, for women, both the uptake and completion rates reduced significantly when the paid internship at a factory in Dhaka was added to the training and stipend. An evaluation of the reasons for the failure to take up the program, despite the initial interest, reveals interesting differences between men and women. An alternative income opportunity in the local area was the main reason for not taking up the program for men but it is the family barrier for women, resonating with the findings of (Cho et al. 2013) in Malawi. An analysis of the rate of program uptake shows interesting heterogeneity where the risk and time preferences play critical roles; present-biased individuals were less likely to take up, while more risk-averse individuals were more likely to uptake our training intervention.

The follow-up data collected six months after the training show that the treatments have

a large effect on employment in the RMG sector. The stipend treatment (T3) increased the employment rate in the RMG sector by an additional 8.4 percentage points, and the OJT treatment (T4) increased it by a further 14 percentage points. Thus, we find that about 25% of those receiving the OJT was employed during the 6-month follow-up survey, a rate substantially higher than any other treatment groups. The effects of the stipend and OJT treatments suggest that migration costs are an important barrier to the employment in the RMG sector. Other than the significant positive impacts on employment and job continuation, we find substantial effects for the participants of the stipend and OJT treatments on income and remittance-flow—especially during the time of the lean season—as well as a reduction in the income poverty. These findings persisted even 18 months after the follow-up survey. We also see some significant impacts on other outcomes, including increases in household assets, a rise in migration for other members of the household, and a growth in urban labor income for the household, predominantly for the treatment group where training was combined with a stipend and OJT components. On the other hand, using rural household estimates, 12-months after the training, we see no statistically discernible impact on consumption poverty for any treatment groups.

The findings above reveal two central issues: First, credit constraints may be an important impediment to migration. Second, consistent with the findings of Bryan et al. (2014), the risk associated with migration may also be a key constraint. In the OJT intervention, the stipend reduces the credit constraints related monetary cost, whereas the OJT itself reduces the risk. These findings demonstrate that stipend and OJT are both indispensable for reducing the barrier to migration, an important lesson for the policymakers.

This study distinguishes itself from many existing studies on job-training evaluations. First, it focuses on a specific job training program rather than a broader range of training programs, where trainees receive different courses provided by different training bodies. Second, the trainees in our study were drawn from the same area and trained in the same location. Thus, taking the first two points together, the concerns about the heterogeneity in the quality of training programs and sorting into different programs or into the same programs offered in different locations is not relevant for our study. Further, we are also immune to the heterogeneity of local labor market conditions that may be correlated with training quality, because the samples are drawn from a particular part of Bangladesh. Therefore, our experimental setup is ideal for focusing exclusively on the demand factors to analyze the uptake and drop-out behaviors. Moreover, during the time of this intervention, there was no dedicated vocational training center located in our intervention area that could provide such skills to interested participants such that the noncompliance in the control group is unlikely to be an issue.

Third, this paper decomposes the impacts of various “plus” components in the training program—specifically the information, stipend, and internship—on the program uptake, completion, and employment. Isolating these components and measuring the impacts of each component on

employment and welfare outcomes has not been done in the existing literature (to the best of our knowledge). Fourth, while our data suffer from some level of attrition, the attrition rate is substantially lower than any comparable experimental studies in the literature. Finally, this is the first rigorous job training impact evaluation carried out using RCT setting in Bangladesh, and only the second ever in the context of South Asia.

Our study contributes to the current literature of experimental evaluation of job training programs. Rigorous evidence of vocational training programs in developing countries has been largely limited mostly to Latin American countries until very recently. Card et al. (2011), using an experimental dataset from the Dominican Republic, have found a modest impact on wages and little impact on employment. In the same country, Acevedo et al. (2017) conducted another experiment with vocation and soft-skills training along with internship and found that the impact was mostly significant for females, which is consistent with an earlier study by Attanasio et al. (2011) in their training program evaluations for the disadvantaged youth in Columbia. Rigorous evaluation of job training programs in Africa are available in Kenya, Uganda, and Malawi. Hicks et al. (2015), in their evaluation of vocational education vouchers for the out-of-school youth in Kenya, find limited evidence that the program increased earnings, although they found that vouchers improved training enrollment and hourly wage earnings. The other two programs, one in Uganda by (Bandiera et al. 2014) and another in Malawi (Cho et al. 2013), focused on self-employment and entrepreneurship and found limited impacts. The only rigorous impact evaluation in Asia is by Maitra and Mani (2017), who offered subsidized vocational education programs for women residing in low-income households in India. They found that the program significantly improved the income and earnings of the females.

This paper is organized as follows. Section 2 discusses the study background while Section 3 discusses the training program and participant selection. Section 4 documents the experiment design. Section 5 describes the data sources and Section 6 the empirical method. In Sections 7 and 8, we analyze the program uptake and impact, respectively. Finally, Section 9 concludes.

## 2 Background

Bangladesh has witnessed a steady economic growth for more than two decades, averaging about 6% during this period. In 2000-14, Bangladesh’s gross domestic product (GDP) grew on average 5.7% per year.<sup>7</sup> The GDP per capita evaluated on a purchasing power parity (PPP) basis increased by 81% over the same time period, reaching US\$3,790 in 2016.<sup>8</sup> The positive economic growth has translated into a steady decline in the poverty. Analyzing two rounds of the nationally representative Household Income and Expenditure Survey (HIES) data for the years 2000 and

---

<sup>7</sup>World Development Indicators, accessed November 10, 2017, covering all the statistics reported in this paragraph.

<sup>8</sup>Constant at 2011 international exchange rate with USD.

2010, the World Bank estimates of overall [extreme] poverty rate of Bangladesh dropped from 48.9% [34.3%] in 2000 to 31.5% [17.6%] in 2010.<sup>9</sup>

A big contribution to this growth and poverty reduction comes from the rising manufacturing sector of Bangladesh, especially the RMG sector. This sector has become a major part of Bangladesh's economy, accounting for an estimated 84% of export earnings.<sup>10</sup> The employment in the RMG sector has made an impressive growth from 0.12 million in 1984 to over 4 million workers in 2014, at an average annual rate of 17% (Kathuria and Malouche 2016, pg. 89). The sector is growing rapidly and a recent study by the Bangladesh Institute of Development Studies (BIDS) estimated that the sector will need an additional 1.5 million skilled workers by 2021 (Rahman and Hossain 2017).

Despite these positive trends and low formal unemployment rate at slightly over 4% in 2013, the labor force participation rate is modest in Bangladesh with a high level of underemployment; around 2.6 million people were unemployed, but an estimated 11 million people were underemployed. Underemployment has increased from an estimated 17% in 2000 to 20% in 2010.<sup>11</sup> The gap between unemployment and underemployment reflects the reliance of the poor on ad hoc subsistence earnings in the informal sector, mostly as informal wage workers. In 2010, 87% of workers were employed in the informal sector (the highest in the region), as much as 75% in 2000 (ILO 2013, p. 83).

This situation is even severer in northern Bangladesh, one of the most disaster-prone areas of the country. People there are most vulnerable to seasonal flooding and riverbank erosion. Most people depend on agricultural activities for living, leaving them subject to seasonal fluctuations and natural calamities (Khandker and Mahmud 2012). Each year, extremely poor people in this area, who are mostly agricultural wage workers, lack employment opportunities during the months of April, July, and especially between September and November after the planting of the major paddy crop *aman*. They also tend to face an increase in the price of staples such as rice during these months, making it even more difficult for the poor, who are typically net consumers of staples, to make ends meet (Khandker 2012). These factors lead to the phenomenon of *monga*. As a consequence, the overall poverty rate of North Bangladesh (Rangpur region) is about 10.8% higher than the rest of the country (World Bank et al. 2010, pg. 8).

Given the widespread poverty and limited income opportunities, one seemingly rational strategy for the poor in northern Bangladesh would be to migrate out of that region for survival, especially given the rising employment opportunities in the thriving industrial sectors in the urban areas such as the RMG sector. However, the poor are clearly not taking advantage of the new

---

<sup>9</sup>For the information on how the poverty is measured, see "Poverty Assessment: Assessing a decade of progress in reducing poverty, 2000-2010", Bangladesh Development Series, No. 31, World Bank, 2013.

<sup>10</sup>Export Promotion Bureau (2015). "Bangladesh Export Statistics 2015" <http://epb.portal.gov.bd/site/files/e51e6097-cdb6-424a-9230-91ace9956929> [accessed on 15th October, 2017]

<sup>11</sup>World Bank 2012. "Bangladesh: Towards Accelerated, Inclusive and Sustainable Growth-Opportunities and Challenges", The World Bank, p. 100.

opportunities there. The emigration rate from northern Bangladesh is very low compared to the rest of the country, as evidenced by various reports and anecdotes (see BBS (2015)). Analyzing HIES of 2000 and 2010, we see that the overall emigration rate in Rangpur region was only 3.28% in 2000, which increased by only 0.33 percentage point to 3.61% in 2010, compared to a national rural-to-urban emigration rate of 26.41 percentage in 2001 (Bangladesh Population Census 2001). Similar to the emigration rate, participation in the RMG sector from Rangpur region is also very low, as Figure 1 shows. Against this backdrop, we explore the barriers faced by the poor in northern Bangladesh to out-migrate in search of better income opportunities in the urban areas.

[Figure 1 about here]

### 3 Training Program and Participant Selection

The experimental intervention of this study was inspired by the Department for International Development (DFID)-funded training program conducted in the Northern Bangladesh by GUK.<sup>12</sup> The official title of the training program was “Reducing Extreme Poor by Skills Development on Garments” (hereafter, the GUK-garments program) which lasted from December 2010 to July 2013. The aim of the training program was to make the poor and unskilled youth of northern Bangladesh gain skills as sewing machine operators for the RMG sector. Under this program, the GUK established a residential training institute with lodging facilities for the trainees in the Gaibandha district of northern Bangladesh and hired experienced trainers from the garments industry as instructors. The program participants attended a month-long training with stipend followed by a paid OJT at RMG factories located in Dhaka, the capital of Bangladesh, for two months. The grant authority claimed that this program had an impressive success rate in its official project report.<sup>13</sup> However, rigorous evaluation of the GUK-garments program was difficult as it was not systematically designed for impact assessment.

To understand the impact of such a reportedly innovative training “plus” program and to understand the impact of each additional components beyond the training such as stipend and internship, through rigorous evaluation, we designed a Randomized Control Trial (RCT) experiment with the same implementing partner. To avoid contamination and minimize spillovers from the participants of the past GUK-garments program, we selected the sample from all the sub-districts of Gaibandha, except for Gaibandha Sadar from where the previous program participants were selected.

---

<sup>12</sup>This funding scheme is termed as SHIREE (Stimulating Household Improvements Resulting in Economic Empowerment). The particular project mentioned in this study was funded during the phase 3 of the Innovation round. For detailed information of this funding scheme, check the following link: [www.shiree.org](http://www.shiree.org)

<sup>13</sup>EOP/SHIREE produced a “Lesson Learning Report” available from the following website: [http://issuu.com/eop.shiree/docs/guk\\_11r/1?e=4460133/10331777](http://issuu.com/eop.shiree/docs/guk_11r/1?e=4460133/10331777)



Our study sample was selected in the following manner: First, we conducted a participatory rural appraisal (PRA) with the help of GUK at each community in our catchment area and then conducted a short survey (SS) to recruit eligible participants on the basis of participants’ demographic characteristics and poverty status.<sup>14</sup> We then verified the poverty status of each household through the verification of all the poverty markers by our survey team’s physically visits and obtained the final sample of eligible households. We use this SS data for randomization. By design, we had only one participant from each sample household.<sup>15</sup> A total of 2,215 households participated in this study.

## 4 Experiment Design

We randomly allocated our sample into an experimental “control” group (with no training-related intervention, a total of 191 individuals) or one of the following four treatment groups with different job-related interventions (a total of 2024 individuals were allocated equally to each treatment group, making 506 individuals for each treatment). The design of the experiment is given in Figure 2.

i) Information group (T1): A day-long job-related information session was conducted for the participants at the union level in our implementation area. During this session, the participants were informed about the RMG industry and factories located in Dhaka. They were also informed about the factory environment, working conditions, hours of work, wage rate, overtime payments, and living environment in the urban location. They also learned how to get a job (hiring procedure) and what the required skills and qualifications are for securing such a job. The session concluded with a moderated question-and-answer session. The cost of this intervention was 2 USD per person.

ii) Training Group (T2): The same information session as T1, plus a one-month long (22

---

<sup>14</sup>Eligibility was based on the following criteria: Irregular income sources, seasonally unemployed, aged between 18-30 (this was the industry requirement for the working age), from moderate poor or ultra-poor (extremely poor) households, and willing to change their current occupation. Poverty status was measured based on household conditions, asset, livestock, and income generating activities, physical (for example, disability or sickness) and marital conditions (widowed or female-headed household). This criterion for ultra-poor gradation was made using our implementing partner’s poverty classification definition. GUK considers a household to be ultra-poor [moderately poor] if the household matches four [two] of the following six criteria: (1) have less than 10 decimal of land (including agricultural, homestead and fallow), (2) do not have any functional productive asset (like livestock), (3) the house is mostly built with straw and mud with only one room, with no separate arrangement such as bedroom, living room and dining room, (4) does not possess any basic sanitary, water or hygiene amenities (like tube-well and sanitary latrine), (5) does not have any regular source of income and remains seasonally unemployed during the local agricultural lean season (monga), and (6) the household head is widowed, elderly or a disabled person.

<sup>15</sup>In cases where there was more than one participant eligible for the program from the same household, our survey team randomly selected one participant by lottery.

working days) residential vocational training intervention in GUK, located in Gaibandha on skills related to sewing machine operations and basic technical know-how of the RMG industry. The residential training program contained lessons on sewing and over-lock machine operations and basics of the ready-made garments production process. Upon successful completion of the residential training program, each participant was awarded a training certificate issued by the GUK.<sup>16</sup> The cost of this intervention was 100 USD per person.

iii) Stipend Group (T3): The same as T2 with a financial stipend (3,500 BDT, about 45 USD) to support migration and forgone income. This amount was calculated based on the daily wage rate at the local area, which was 160 BDT per day (about 2 USD). This stipend amount was given in two installments, one at the beginning of the training and the other at the end. Those who discontinued the program after the first installment was ineligible to receive the second installment, but they were not obliged to return the first installment. The cost of this intervention was 145 USD per person.

iv) OJT Group (T4): The same as T3 above, plus an apprenticeship (internship) in the form of one-month OJT in a factory in Dhaka. GUK signed the memorandum of understanding (MoU) with 14 garment factories in Dhaka for OJT placement for the participants.<sup>17</sup> The cost associated with this relocation—mostly for the transportation and initial moving cost—was borne by the participants using the stipend allowance. The total cost of this intervention was 185 USD per person.

[Figure 2 about here]

This experiment was designed in such a way that one can estimate the impact of information on employment in the RMG sector as a difference between the information (T1) and control (C) groups (i.e., T1-C). Then, the impact of vocational training alone is identified as T2 -T1, the impact of credit alone as T3-T2 and the role of OJT component alone as T4-T3. Similarly, the experiment design can estimate the combined effect of training and stipend as T3 -C and combining all the components of training, stipend, and OJT as T4 - C.

This careful design of the experiment attempts to unbundle the various constraints faced by the poor, rural unemployed youth. First, the poor rural youth in Gaibandha may not have relevant information on “how to get a job” in the RMG factory. Lacking RMG exposure, information on job requirements and the network may be major obstacles faced by the poor rural

---

<sup>16</sup>On a typical day of training, the session starts with one hour of technical lesson and the rest of time is dedicated for practical sessions. At the end of the training day, an hour is dedicated on reviewing the lessons.

<sup>17</sup>Due to their previous intervention success of the training program under SHIREE, many previous factories continue to accept GUK program participants as interns. Moreover, GUK internship placement office also facilitated the accommodation arrangement for the participants in Dhaka.

youth. Heath and Mobarak (2015) found the exposure to RMG factory is largely localized in those areas where the factories are located. Hence, the rural youth of Gaibandha are often uninformed about the job potentials at these factories and the requirements for getting a job there. A phenomenon like this has also been observed in other settings, such as call center jobs in India (Oster and Steinberg 2013).

However, just providing information about the job prospects may not trigger migration and employment, especially for the unemployed youth. The industry is currently experiencing a sizable shortage of labor, mainly for the position of sewing operators; hence, the employment demand is more for such skilled positions. Rahman and Hossain (2017)(pg. 29) skill gap report stated a current shortage of 83,000 swing operators in the RMG industry and projected demand of 3 million operators by 2021. Without any training or job experience, the only position someone can secure in the RMG sector is the work of a sewing operator helper (also known as assistant sewing machine operator). This is an entry-level position in the RMG industry and its pay is considerably lower than that of the sewing machine operator position, which pays 27% more in base salary. Usually, it takes years for someone to progress from a helper to an operator—with the help of in-house training—and most of the current labor force employed in the industry entered as unskilled helpers (Rahman and Hossain 2017).<sup>18</sup> Hence to tackle the skills constraint, we provided dedicated training to a random subset of the participants to become swing operators. The GUK training was designed to gain necessary skills to qualify at least at the level of the junior operator at the garment factories. GUK also provided a certificate of training completion, to tackle the information asymmetry problem faced by the employers; however, it appears that the recruitment process in the RMG sector is typically a “walk-in-test” (Rahman and Hossain 2017) and such certification does not carry much importance during the time of the recruitment.<sup>19</sup>

Skill shortage is not the only constraint faced by the rural youth; there are additional barriers: access to credit, savings (liquidity) constraints, and risk and uncertainty of the migration. Rural poor typically live nearly at the subsistence level; most of them are poorly educated, unskilled, lack financial means to invest, and work in the seasonal agriculture sector. Hence, they typically do not have any opportunity for obtaining a formal-sector employment with an above-subsistence wage rate. Saving is difficult for them due to the lack of suitable instruments. Borrowing is also challenging, especially for purposes like migration or skill acquisition. The credit market is imperfect, and the credit provided by MFIs typically cannot be used migration or training. Hence, the poor typically face liquidity and credit constraints.

---

<sup>18</sup> An unskilled worker typically enters the industry as an assistant or helper, and then progresses to junior operator, then operator to senior operator or even line manager based on the level of skill acquisition. The entry position is equivalent to the “Grade 3” in the current minimum wage structure of Bangladesh (effective since December 2013). The minimum basic wage for this position is 3,000 BDT (about 38.50 USD), with other fringe benefits (like housing allowance) minimum wage earning of this position is 5,300 BDT (about 68 USD).

<sup>19</sup>GUK provided merely a completion certificate of the vocational training program and thus this certificate does not serve as a proof of the trainee’s skills.

However, migration can be risky, and the outcome of the migration decision is typically uncertain. Someone who has never worked in the urban areas or exposed to factory working conditions may find it extremely difficult to decide to migrate out of the rural area. The perceived risk may be even higher for factory jobs, which have specific skill requirements and demanding working conditions. Without prior exposure and experience, individuals may feel insecure about whether they would be able to cope, survive, and continue their jobs in the RMG sector. This uncertainty of job outcome and risks associated with migration may be one of the important barriers for the rural youth. The OJT component helps the skilled participants to assess the risk of migration, reduces the uncertainty related to employment, and mitigates the information asymmetry between the potential employers and employees through the OJT. While having an OJT component in a vocational training program is not new in itself (see the Jóvenes en Acción program evaluation by Attanasio et al. (2011)), there exists no other study, to the best of our knowledge, that measured the role of OJT on migration, employment, and job success in a developing country.

Due to the limited training capacity by our implementing partner,<sup>20</sup> we used a “phase-in” design for our treatment offer, where the eligible participants were randomly assigned to each of the four blocks, which basically is the timing of the treatment assignments. Each “phase” is a period of three months window, so that a participant can get a minimum of one-month time (or a maximum of three months) after the announcement of the randomization and the actual training schedule. This was important for our study design, as we did not want our participants to wait for many months before the actual training dates, which could potentially decrease the uptake and training completion percentage of the participants. However, during the treatment and phase-in design assignment, we made sure that our randomization is balanced on observables within each phase and across the phases. GUK conducted a total of 12 batches of training from November 2013 to November 2014, following the phase-in design discussed above. The detailed design of these training phases is depicted in Table A. To track the participants for the purpose of the survey, each participant was given a mobile-phone connection (SIM card) during the baseline survey and airtime top-up incentive as a reward for participating in each of the follow-up surveys explained below.

[Table A about here]

---

<sup>20</sup>GUK could accommodate and train a maximum of 100 participants at a time and their training session lasts for 22 working days.

## 5 Data

We conducted a baseline survey on 2,215 eligible households from September to November 2013.<sup>21</sup> The average age of our sample participants was 22.42; none of them ever had any higher education beyond the secondary level; about one-third of them were married and about half of them belonged to ultra-poor households. A large number of these participants were seasonally unemployed, lacked professional skills, had poor assets, and mostly worked as rural agricultural laborers. The detailed summary statistics for our data are given in Table 1A in the Appendix.

Six months after receiving the intervention, the participants were surveyed again over the phone for a short follow-up survey (conducted from May 2014 to April 2015). A detailed panel survey of each participant was undertaken after one year of the intervention (conducted from November 2014 to October 2015). A second follow-up survey of the participants (over the phone) was carried out 18 months after the intervention (May 2015 to April 2016). The overall attrition rate of all the follow-up surveys is about 3.91%, which is well below any comparable study on ALMPs or vocational training in developing countries. We also found no evidence for systematic attrition in the regression of the attrition indicator on the treatment assignment. The details of attrition rate for all the surveys and regression of attrition indicator are reported in Table B and Table 1B (in the Appendix), respectively.

[Table B and Table 1B about here]

Table 1 shows that the pre-treatment observables are well balanced across all the treatment arms during the baseline. Out of the 20 covariates, only one covariate (food shortage during *monga*) showed imbalance at the conventional level of significance for the OJT group; those in the OJT group were more likely to suffer from food shortage during the lean season compared to the control group. We also tested the joint significance of all the covariates assigned to a particular treatment group and the null hypothesis cannot be rejected at the conventional significance levels. Overall, we see that the observable variables were balanced across different treatment groups during the pre-intervention period.

[Table 1 about here]

---

<sup>21</sup>Households completed a 90-minute long baseline survey. The measure of time and risk preference was done hypothetically. The SANEM team was responsible to conduct the survey in Gaibandha. We paid about a half-day's wage as survey compensation to the households. The duration and compensation provided for the 12-month panel survey was same as the baseline survey.

## 6 Estimation Equations

We denote the outcome variable of interest of individual  $i$  of household  $h$  originating from village  $j$  by  $Y_{ihj}$ . We estimate the average impact of the program through the following regression:

$$Y_{ihj} = \beta_0 + \beta_{T1}Info_{ihj} + \beta_{T2}Training_{ihj} + \beta_{T3}Credit_{ihj} + \beta_{T4}OJT_{ihj} + \beta_1X_{ihj} + \mu_j + \varepsilon_i, \quad (1)$$

where  $\beta_{Tk}$  is the main coefficient of interest and captures the “intent-to-treat (ITT)” effect of treatment  $k \in \{1, 2, 3, 4\}$ , or the effect of being assigned to treatment  $k$ . The error terms  $\mu_j$  and  $\varepsilon_{ihj}$  represent village- and individual-specific effects. All the standard errors reported in the regression tables are clustered at the village level. To increase the precision of the estimates and to control for attrition on observables, we also include a vector  $\mathbf{X}_{ihj}$  of individual- and household-level control variables.

To understand the overall impact of treatment-induced migration on employment, job continuation and overall household condition, we also conducted instrumental variable regressions. This is also a policy-relevant question, at least in our setting, which could answer whether migration could lead to substantial benefits to the participants and their households. Hence, we performed instrumental-variables (IV) regressions, where the indicator variable for migration is taken as an endogenous regressor and instrumented by the set of treatment assignment indicators. The IV estimates correspond to the Local Average Treatment Effect (LATE) under the monotonicity assumption, which requires that there is no defiers, or those people assigned to a treatment group who did not take up the training but would choose to get a training had they been assigned to the control group. In our experiment, it is reasonable to assume that the monotonicity assumption holds because the treatments were offered for free and there was no other training centers nearby as noted earlier. For the latter reason, it is also reasonable in our setting to assume that there is no always-taker, who would get a training regardless of whether the training is offered. Therefore, we interpret the IV estimates as the average effect of the treatment on the treated (TOT). The IV regressions allow us to identify the effect of migration on the outcome. However, if the treatment affects the outcome through a channel other than migration, the IV estimates will be biased. Therefore, the IV results should be interpreted with caution.

## 7 Program Uptake

The overall uptake rate of the program was 66.5% (excluding the control sample) with a completion rate of 92.0% (given uptake).<sup>22</sup> For any training treatment with a month-long component

---

<sup>22</sup>By uptake, we mean those who were assigned to different treatment arms, how many of them signed up for the program. By completion, we mean those who took up the program, how many of them completed the

(i.e. T2, T3 and T4), the uptake rate was 63.8% with a completion rate of 88.8%. Figure 3 shows that the uptake rate varied across treatment groups. Among the training groups, the uptake rate was the highest at about 75% for T1 and T3 groups—those who were offered a one-day information session and those who were offered training combined with a stipend. Both uptake and completion rates were lower for the T4 group with the uptake rate of 60% and the completion rate of 45%. As the design of T4 was the combination of two training components—residential training and an apprenticeship—we considered that a participant completed the T4 program if she/he had attended and completed both the components. However, if we simply compare the residential training component across the relevant treatment arms, then the drop-out rate is 4.55, 1.98 and 8.89 for T2, T3, and T4, respectively.

[Figure 3 and 4 about here]

Gender-specific comparison of the uptake and completion rates provide us an interesting pattern. The uptake and completion rates show similar pattern across the treatment arms based on gender, as shown in Figure 4, except for the OJT (T4) group. The uptake rate of T4 for females is only 46% compared with 69% for males. Similarly, the completion rate for females is substantially lower than that for males (29% for females and 56% for males). The regression analysis of the program uptake is reported in Table 2 of the paper, wherein column (1) reported the regression results for basic specification without any additional controls. In column (2), we added additional controls listed in Table 1, except for those variables capturing the risk and time preferences, which were also included in column (3). Columns (4) and (5) further included the village-level fixed effects and interaction terms of female dummy, respectively, with treatment indicators and with the time and risk preferences. Columns (6) and (7) report the subsample regressions by gender.

Table 2 shows that the training (T2) and OJT (T4) treatments have a significantly lower uptake rate than the information treatment (T1). The program uptake of the T2 group is 18.3 percentage points lower than the T1 group uptake rate of 0.75% (p-value 0.000), using the specification reported in column (5). The OJT group’s uptake rate is also substantially lower than the default group, about 14 percentage points lower than the base. The difference between T2 and T4 is not statistically significant (p-value of 0.266). Our estimation also reveals that adding the stipend component increases the uptake rate by 19 percentage points (p-value 0.00) compared with the training-only treatment (T2); however, adding the OJT component reduced the uptake significantly, by 15 percentage points.

[Table 2 about here]

---

treatment intervention.

In columns (3) and (4), we additionally controlled for personality traits, individual risk and time preferences, and its interaction with the female dummy, respectively. We found that these personality traits matter for the program uptake decision: Risk-averse individuals are more likely to take up the program (6 percentage points more) whereas those present biased, are less likely to take up (8 percentage points less). These impacts are statistically and economically significant. Our program intervention provides various opportunities to relax constraints for migration and employment in the RMG sector; hence, for a risk-averse person, it is much safer to take up our randomized free intervention offer compared to the risk-loving individuals. Decreasing uptake by present-biased persons also makes sense. Skills training program does not yield a return immediately; hence, for a present-biased individual, the immediate gain or earning opportunity is particularly important, which lead to a lower uptake rate. This shows the importance of introducing a commitment device which can help improve the uptake rate of a training intervention provided for free. However, going deeper into this analysis of the personality traits and uptake rate, it appears that the program uptake is significantly lower for females, especially those who are present biased, whereas risk averseness matter more for males for the program uptake. Consistent findings are obtained when subsample analysis are conducted gender-wise as shown in columns (6) and (7). Our analysis also reveals that the low uptake rate for the OJT group is largely due to the females, consistently found in estimations reported in columns (4) and (7).

In Table 3, we repeated a similar exercise with a subsample of those who were offered any training or training “plus” program to understand the pattern of training completion across different treatment arms (among T2, T3, and T4). Compared with our default category of T2 completion rate of 0.52%, the T3 group was more likely to complete the training (about 20 percentage points higher) whereas as the T4 group was less likely to complete (about 6.3 percentage points lower). Our regression result demonstrates that adding the OJT component on top of training and stipend reduced the training completion rate by 2.7 percentage points (p-value 0.00). We also found that the females were about 9 percentage points less likely to complete the program. The lower completion rate for the T4 treatment group was largely due to the female participants. This point can be seen from the statistical significance of the treatment indicator interacted with the female dummy as reported in column (4) in Table 2. Subsample analysis by gender reported in columns (5) and (6) also corroborate with this result. We did not find any robust evidence of statistically significant correlation of risk and time preferences with the program completion.

[Table 3 about here]

We also asked participants to report the main reason for not taking up the program and discontinuing the training. Figure 5 shows that 38.2% of the respondents reported “already managed an income activity” as their main reason for not taking up the program, followed



by 18.3% reporting “not interested or afraid to go to Dhaka” and 14.8% reporting “resisted by husband or wife”. Gender-specific classification of this diagram reported in Figure 6 shows another concerning pattern. For male respondents, a majority (56.7%) reported an “economic” cause for not taking up the program. In contrast, the female respondents reported noneconomic causes like “resisted by husband” (31.0%). To understand which treatment group is more likely to report such causes, we ran regressions on the top two reported reasons for non-uptake in Table 4 [columns (1) to (6)]. In columns (1) to (3), we created a dummy for “family restriction” by clubbing the following causes for not taking up: “resisted by husband/wife” and “resisted by parents”. Our regressions confirm that females were most likely to report such causes when they were offered T2 or T4 treatment, whereas the males reported income opportunity in the local areas as their main cause of not taking up the program when T2 was offered [columns (4) to (6) in Table 4].

[Figure 5 and 6 about here]

Now focusing on the reasons for dropout, we created a dummy variable for “afraid to go to Dhaka,” which is the most frequently mentioned reason for dropout from the training in the survey. Our regression confirms that the OJT treatment group, and mostly females, reported this cause as their main reason for discontinuing the program despite initially taking up [columns (7) to (9) in Table 4].

[Table 4 about here]

Taken together, we see that the uptake and training completion rates are higher when the training is combined with a stipend. The training treatment (T2) discourages males from taking up and continuing the program, whereas the OJT treatment (T4) largely discouraged females. Noneconomic barriers, such as family obligations and restrictions, are among the key factors for the low uptake and training completion rates for females. These findings are consistent with the studies that have highlighted the gender difference in the uptake and drop-out behaviors. For example, Cho et al. (2013) have reported that family obligations may constrain women more than men from participating in a job training program in Malawi. Similarly, Chun and Watanabe (2012) report that females are significantly less likely to participate even after controlling for various covariates in Bhutan.

## 8 Impact

### 8.1 Short-Run Impact on Participants

#### 8.1.1 Employment

An important outcome of interest of the training intervention is employment. We first used the 6-months follow-up survey to evaluate the immediate impact of the program on migration, employment success and job continuation. In Table 5, we report the results of the regressions of a variety of employment outcome variables. The ITT estimates are reported at the top of the table, whereas the IV regression results are reported at the bottom. The IV regression requires a valid and strong instrumental variable (IV), in which the indicator variable “Migrated within 6 months of the intervention,” which takes a value of one if the study participants migrated within the 6 months of intervention and zero otherwise, is taken as an endogenous regressor. The 6-month space from the intervention provides an adequate time window for the migration decision.

This endogenous variable is regressed on a set of the treatment assignment indicators, along with a vector of household and personal characteristics, and geographical control at the level of the village. As any employment-related impact on participants will include the migration decision (there is no industrial sector in Gaibandha), the exclusion restriction we have in this setting is likely to hold. This IV regression estimation of the “first stage” is reported in column (1) of Table 5, where we can see that the random assignment of the treatment arms is an influential predictor of the migration decision within the 6-months period of the intervention.

[Table 5 about here]

In Table 5, we have reported the ITT estimates in Panel A and the ToT estimates in Panel B (the rest of the paper is organized in the same manner). The first outcome variable that we are interested in is the employment status of the individuals in factory/industrial jobs. Column (2) shows that both the stipend (T3) and OJT (T4) treatments significantly increased the likelihood of continuing a job in an urban location. The stipend treatment group was 6.2 percentage points more likely to be employed than the base mean of 5% employment by the control group. However, the magnitude of the OJT group is significantly higher than the control mean by 17.1 percentage points. What is noticeable here is that the information campaign (T1) and the standard vocational training treatment (T2) did not make any statistically or economically significant impact on employment, resonating the previous findings of the limited impact of the vocational training program.

With these estimations, we can attribute impacts on different components of the training “plus” program, namely Information (I), Job Training (J), Stipend (S) and Apprenticeship (A),

in the form of on-the-job-training. As discussed in section 4, the estimates of impacts on different components of the training “plus” program can be summarized, following Dupas and Robinsona (2013), as follows:

$$T1 = I$$

$$T2 = I + J$$

$$T3 = I + J + S$$

$$T4 = I + J + S + A.$$

where T1, T2, T3, and T4 are the treatment indicators reflecting the RCT design. Therefore, from Table 5, we can derive the implied impact of having a stipend component (S) on top of training by taking the difference between T3 and T2. Based on this calculation, the stipend component increased the employability by 5 additional percentage points (p-value 0.01). A similar calculation (T4-T3) shows that the contribution of apprenticeship (A) component improves the employability by another 11 percentage points, the largest contribution among all the components. Our ToT estimation in column (2) of Panel B shows that migration—which was induced by different treatments as found in the first stage regression—increased the likelihood of employment by about 50 percentage points after controlling for all the observables. This is economically large and highly statistically significant.

Now let’s focus on the sector of employment. Among those who reported getting a job in the industrial sector during the 6-month follow-up survey, a large majority (72.9%) were employed in the RMG sector, followed by employment in the textile sector (18.6%). Column (3) in Panel A of Table 5 shows that both the T3 and T4 treatments significantly increased the likelihood of RMG employment, by 8.4 and 21.9 percentage points, respectively (from the control mean of 3 percentage points). Similarly, as found in the employability estimation, we find that the contribution of the apprenticeship (A) component is substantial and more than double the size of the stipend (S) component for RMG employment (which is the estimation of T4-T3 compared with T3-T2). The ToT estimates show that out treatment-induced migration contributed to a 64.7% more employment in the RMG sector compared with the control. A similar pattern exists for other variables, namely “at least employed for a month in the last 6 months” and “sent remittance at least once in the last 6 months” as reported in columns (4) and (5) of Table 5.

To understand the overall impact of our intervention on a range of “family” outcome variables, such as “employment,” we first created an index by standardizing the “family” of variables by subtracting the mean and dividing by the variance of the control group to construct z-scores. We then take the arithmetic mean of the “family” z-score variables as an aggregate index for the “family” and make inferences with the aggregate index to tackle the multiple inference problems as suggested by Kling et al. (2007) and Karlan and Zinman (2009). Following this method, in column (6) of Table 5, we have the “employment index” created by using the variables reported in columns (2)-(5). Column (6) shows that treatment T3 increased the employment index by

0.47 standard deviation (SD) units and that treatment T4 increased it by 1.22 SD units, both of which are highly statistically significant. As found before, the Apprenticeship (A) component’s contribution is large for the employment index (that is T4-T3), 0.76 SD units compared with 0.37 SD units for the stipend (S) component (which is T3-T2). Consistent with our uptake and training completion results, overall, females performed lower than the average, 0.58 SD units below than the control mean, largely due to lower migration by females (13.5 percentage points lower than the control average, using the first stage result reported in column (1)).

### 8.1.2 Wage Income

Column (1) in Table 6 reports the regression analysis of employment continuation. The ITT estimates show statistically significant impact of the stipend (T3) and OJT (T4) treatments on employment continuation, estimated under “months of employment” variable. Since the outcome variable is measured in months, our regression shows that the T3 treatment group on an average was working 0.5 months more whereas the T4 treatment group was working 1.23 months more than the control group mean of 0.42 months of employment. Given more months of employment by the T3 and T4 treatments, one can expect higher wage income for these two groups in the last 6 months, which is reported in column (2). On an average, the stipend (T3) group earned about 3,792 BDT (49 USD) more than the control group mean of 2,939 BDT (38 USD), which is about 29% higher than the control group mean. On the other hand, the OJT (T4) treatment earned a total of 8,947 BDT (about 115 USD) in the last 6 months, which is more than double of the mean earning of the control group in the last 6 months.

[Table 6 about here]

Component specific impacts based on these estimates are reported at the bottom of Panel A. As we can see, the stipend (S) and apprentice (A) components significantly contributed in the wage-earning success, where the training impact on wage earning is substantially higher when the training is combined with either stipend (S) component (T3-T2 is 2,084 BDT or 26 USD with a p-value of 0.03) or apprenticeship (A) component (T4-T3 is 5,155 BDT or 66 USD, with a p-value of 0.00).

These findings are also consistently found in the regressions of average working hours and wage income as reported in columns (3) and (4). Since we use the wage income over the last 6 months based on recall, the accuracy of the data may be a concern. We, therefore, also used the immediate last month’s salary and working hours as outcome measures in the regressions reported in columns (5) and (6) of Table 6. These results are consistent with those based on 6-month recollection, our ToT estimate also show that treatment-induced migration substantially benefitted the participants to gain continuous employment (3.049 months more employment compared with non-migrants) and substantial wage income (a total of 23,436 BDT or about 300

USD more income in the last 6 months compared with non-migrants), as reported in Panel B of Table 6.

### 8.1.3 Remittances

An impact channel we are interested in is the remittance flow of the participants. To understand and measure the impact of treatment intervention on remittances, we asked participants about remittances over the last 6 months in the first follow-up survey. Table 7 reports the regression of remittances. In column (1), we regressed the number of months any individual sends remittance to his/her rural origin households [the extensive margin of this regression is already reported in column (5) in Table 5]. Consistent with previous regressions reported before, we found the stipend (T3) and OJT (T4) treatment groups have sent remittance more regularly than the rest. Compared with the control mean, the remittance frequencies for T3 and T4 were, respectively, 0.73 and 0.66 months more than the control mean of 0.12 month.

[Table 7 about here]

However, component specific impacts based on these estimates show that adding stipend (S) component with training (J) does not significantly contribute to the remittance frequency (T3-T2 is 0.10 with a p-value of 0.18), whereas the apprenticeship (A) component substantially contributes (T4-T3 is 0.49 with a p-value of 0.00). The total remitted amount, as reported in column (2) in Table 7, is also higher for the T4 group (1,993 BDT or 25 USD higher) and the apprentice (A) component contributes an additional 1,203 BDT (about 15 USD) remittance when combined with training and cash support. The six-months average remittance analysis in column (3) also reports similar findings; the average remittance amount is 753 BDT (9.7 USD) higher in the OJT treatment group (T4) than the control mean of 120 BDT (1.5 USD). Our estimations are robust even when we use immediate last month's recall data of remittance sending records of the participants as reported in columns (4) and (5). In column (6), we create a standardized "remittance index" combining all the variables of columns (1)-(5) and regress it on the treatment indicators and observables. This regression shows that T3 increases the remittance index by 0.41 SD units and T4 increases by 1.06 SD units, from the control mean of zero. Both estimates are substantially large and highly statistically significant. The component analysis shows the apprenticeship (A) component itself contributed 2.5 times larger on remittance index than stipend (S) component (comparing T4-T3 with T3-T2). Our ToT estimates also show similar effects; the treatment-induced migration helped participants to send more frequent remittances and in substantially larger amounts (a total of 6026.31 BDT or 77.26 USD more in the last six months) as reported in Panel B of Table 7.

### 8.1.4 Wellbeing Indicators

In Table 8, we estimated the impact of treatments on the participants’ overall wellbeing as measured by financial, physical and emotional indicators. For the brevity of the analysis, we have reported only the index variables. Detailed regression estimates of all the components of these indexes are available upon request.<sup>23</sup>

Let us first focus on the financial wellbeing indicators, measured through savings and borrowing indexes reported in columns (1) and (2). We see a substantial impact in the T3 and T4 treatments on savings indicators as measured by the “Savings Index.” Being in the T3 or T4 treatment group increases the Savings Index by 0.4 SD and 0.33 SD unit, respectively, although the difference between the T3 and T4 groups is statistically insignificant. On the contrary, we do not see any significant impact on “Borrowing Index” as reported in column (2) although the difference between T4 and T3, which measures the apprenticeship (A) component contribution, is negative and significant (T4-T3 is -0.23 with a p-value of 0.00). ToT estimates of financial wellbeing show a substantial impact on migrants. Migrants are 0.58 SD unit higher in the Savings Index and 0.61 unit lower in the Borrowing Index, compared with the base. Both estimates are highly statistically significant.

[Table 8 about here]

Our intervention was primarily intended to encourage and help participants to get a job in the industrial sector, especially in the RMG sector. However, one specific concern one might have is the impact of factory working conditions on the physical stress measure, a concern which was raised in the recent work of Blattman and Dercon (2016). We used a self-reported physical, family and non-work-family related stress measures from participants and created the index.<sup>24</sup>. Regression analysis using these indicators—reported in columns (3) to (5)—did not show any concerning sign, and if anything, our ITT and ToT estimates show that the stipend (T3) and OJT (T4) treatments reduce family-related stress significantly and the migrants are less likely to report any family-related stress in the short-run.

---

<sup>23</sup>Saving index was created with the following variables: total cash saving in the last 6 months, total in-kind savings in the last 6 months, whether the participant has any formal bank account (dummy) and whether the participant has any formal savings account, like fixed deposit or DPS (dummy). Borrowing index was created using the following variables: total amount of borrowing in the last 6 months and dummy variables for the participant having borrowed from any MFI, from any informal moneylender, through his/her social network like relatives, neighbors, or colleagues, from his/her employer, and from any shopkeeper (i.e. buying on credit).

<sup>24</sup>Asked using a self-reported survey questionnaire. Responses were measures in Likert scale which was later converted into a dummy (1 if the reported response is within the range of “likely” or “more likely”) and then standardized to create the index. Details of the index construction is given in Table 1C in the Appendix

## 8.2 Mid-term Impact

### 8.2.1 Household Socio-Economic Status

We collected detailed household information during the 12-month panel data survey. Our dataset included information on overall household income from various sources, household expenditure, food consumption, savings, borrowing, household conditions, the total amount of assets (both productive and non-productive), and overall vulnerability indicators. We first generated a “family” of similar variables under each category and then created the standardized index. For brevity, we only reported the index in Table 9.<sup>25</sup> Overall, our estimates show that our treatment had mostly no impact on any outcome measures except for the household asset index [reported in column (3) of panel A], where the OJT treatment significantly increased the household asset index by 0.21 SD units compared with the control group. Nevertheless, we do not observe any impact of treatment on the overall household socio-economic condition.

[Table 9 about here]

### 8.2.2 Poverty Status

In Table 10, we report the poverty measures of the participants and households using the 12-month survey. Our outcome variable of interest is the poverty status based on the local income poverty measures and takes the value of 1 if the per-person per-day poverty measure is below the poverty threshold.<sup>26</sup> In column (1), we report the income poverty of our study participants based on the reported wage income for the last 12 months after intervention.

Our estimate shows that our participants who have been randomly assigned to the stipend (T3) and OJT (T4) treatment groups have managed to reduce their income poverty significantly. Compared to the control group mean of 72.8% below poverty, the poverty rate has significantly reduced by 10 percentage points for the T3 group and 17 percentage points for the T4 group, holding everything else constant. The ToT estimate reported in Panel B of column (1) also reflects this. The treatment-induced migration led to a 34.7 percentage points reduction in poverty, compared with non-migrants, an impact that is economically sizable.

[Table 10 about here]

However, this improvement by the participants does not translate into a reduction in the rural origin households’ poverty status. In column (2), we measured the poverty status of the household

---

<sup>25</sup>Details of this index generation process is given in Table 1C of the Appendix.

<sup>26</sup>We use an international poverty line of 1.9 USD per day per capita converted to Bangladeshi taka for the year 2015 on the purchasing power parity basis. Using the 2015 PPP conversion factor for Bangladesh which is 27.97, the international poverty line at 2015 price was 53.39 BDT per person per day, which was used for the poverty estimates in Table 10. For reference, please note that the international poverty threshold converted to PPP equivalent was 48.66 taka per person per day during the baseline in 2013.

based on per day per person income for the last 12 months after the intervention, including the remittance information reported by the households.<sup>27</sup> The estimates reported in column (2) provide weak evidence of poverty reduction only for the OJT (T4) group, which is significant at a 10% level. In column (3), the remittance information is replaced by the one reported by the participants of the study. The statistical significance and point estimate are both higher now. However, poverty estimates, based on the household’s food and nonfood consumption, and expenditure estimates do not give us any statistical significance for any treatment groups. This is strongly consistent with the ToT estimates reported in Panel B as well.

There are many possible reasons for this finding, including under-reporting of the food consumption, persistent food consumption habits of the rural households, which does not change dramatically with the income shock (Banerjee and Duflo 2007), and insufficient remittance flow. From our estimates in Table 7, we see that the OJT group on average sent 873 BDT (about 11 USD) per month during the first six months after the intervention. Given our mean rural family size of 4 people, this translates into a transfer of 7.27 BDT (a 13.62% contribution to the poverty threshold) per person per day, which may be insufficient to have a sizable impact on poverty. It could also be the case that 12 months is not long enough after the intervention to detect a discernable impact on poverty.

### 8.2.3 Insurance Role of Migration

One important aspect of our intervention is to see whether the treatment-induced migration could function as a form of “insurance” against seasonal shocks and hunger during the *monga* season. In Table 11, we analyzed the remittance information and frequency of the participants during the *monga* period. We report in column (1) the analysis of the extensive margin of whether participants send any remittance during the period of *monga*. Also, we looked into the intensive margin of this remittance flow during *monga* by analyzing the frequency and total amount in columns (2) and (3), respectively. Our ITT estimates show that OJT treatment participants significantly send more remittance during *monga*, consistently found both in the intensive and extensive margin estimates. Component-specific estimates show that apprenticeship’s (A) role was always sizable and significant based on the estimates (T4-T3 is statistically significant and large for all the estimates). Our ToT estimates show that migration resulted in a significantly increased remittance flow during *monga*. These results are encouraging, especially the amount sent by OJT (T4) group during *monga*, a mean amount of 793 BDT (about 10.2 USD), which is substantially larger than the amount sent by other treatment groups during the same season. This finding confirms the role of migration as an insurance in the form of remittance during local shocks faced by the household, as found by Bryan et al. (2014).

---

<sup>27</sup>We have two sources of remittance information, one reported by the migrants and the other reported by the households.



[Table 11 about here]

#### 8.2.4 Intrahousehold Spillovers

One interesting aspect of the consequences of skills training is its impact on other immediate household members. Because migration is risky due to the uncertainty of job prospect at the migration destination, having an immediate family member in the destination can substantially reduce the risk. To explore this front further, we run regressions for the participants' family members who have also migrated out of the village within the last 12 months after intervention. Columns (4) and (5) of Table 11 present the regression estimates, which show the evidence of substantial intrahousehold spillover of the treatment effect. Our treatment interventions, especially for the OJT (T4) group, increased migration of other family members to urban locations. Column (5) captures the wage income of the other migrated family members, which is also substantially higher than the control group. Our ToT estimates also confirm this intrahousehold spillover effect; migration by the participants indeed induces other members of the family to migrate to an urban location (13.4 percentage points higher), which is strongly statistically significant and sizable.

### 8.3 Long-Term impact on Participants

During the 18-month follow-up survey, we made inquiries on participants' employment status to verify whether the treatment effect is persistent even at the 18-months period, after the initial intervention. It could also be the case that individuals who initially migrated may have returned to their home villages due to issues like tough working conditions, homesickness, not getting accustomed to the urban lifestyle, sickness, or family obligations. Table 12 reports the regression outcomes of employment-related variables, as done in Table 5 previously. Our estimations are similar to what has been found during the 6-months survey; however, the impact magnitude has reduced. The employment index estimation reported in column (5) of Table 12 shows that the stipend (T3) group has significant impact on the employment index, 0.4 SD units higher than the control mean, whereas the OJT (T4) group has an even larger impact, as found previously, 0.72 SD units higher than the control mean, which is strongly significant.

[Table 12 about here]

Component-specific impacts based on these estimates confirm what was found before in Table 5. Both stipend (S) and apprenticeship (A) significantly contributes to the employment index when measured during the 18-month period, demonstrating the importance of cash support and apprentice opportunity, which help the participants to overcome some of the non-skill related barriers. The ToT estimates reported in Panel B similarly confirm our previous findings even during the 18-month period.

## 8.4 Treatment Saturation Analysis

In Table 13, we measure the village level treatment density by measuring a number of different treatment participants in each village as a ratio of the total sample in the village and regressed individual migration and employment outcomes on these treatment density variables. The first regression results reported in column (1) shows that having a participant of similar treatment in one's village increases the migration likelihood significantly, which shows the risk-sharing practice by the individuals. Migrating together with other participants in the village who got similar treatment entails some additional risk-sharing benefits; individuals can share their social and job networks, which can potentially reduce the uncertainty of the migration outcomes. Also, participants can share the cost of migration by splitting the accommodation and living costs, making migration decision less risky. Column (1) shows that larger the ratio of similar treatment participants in the village, the likelihood of migration is significantly higher for the participant compared with the base, which is the ratio of control participants to the total sample in the village. The impact is substantial even at the 18-months survey reported in column (2) in the table. Noticeably, for all the regressions reported in Table 13, the OJT ration to the total sample participants in the village has the most sizable, economically significant and persistent impact even at the 18-months period.

[Table 13 about here]

## 9 Conclusion

Segmentation between skills/training programs and the labor markets prevents matching of industry demands with an appropriate supply of workers, especially among the youth who are poor and disadvantaged. Finding ways to help shift large numbers of workers from inefficient informal sector to productive wage work in the formal sector is critically important for many developing countries with a sizable informal sector. However, public vocation training programs have largely been ineffective to solve this problem, because there are other barriers to labor migration and employment than the skill shortage, which has been the primary (and often exclusive) focus of most existing training programs.

In our rigorous RCT study, we found evidence that simply providing skills training is inadequate. This is because it typically suffers from a low uptake rate and is ineffective in improving employability, job continuation, and households' socioeconomic conditions. We show that vocational training would attract more disadvantaged participants when it is combined with the stipend component to cover the forgone income and financial support for migration and job search. We found that adding an apprentice component, in the form of a short-term, paid on-the-job training, can really help the poor to migrate and secure a job. These impacts persist

even 18 months after the intervention. The OJT provides with the participants a firsthand experience to get exposure in the factory environment and urban living, simultaneously helping the employers to judge the skills of the participants and to reduce the information asymmetry between the prospective employers and employees.

We consistently find that females face noneconomic social barriers in taking up and completing the training program. Patriarchal norms on women's role in the family as the primary caregiver could be one reason for these findings. Social norms are particularly relevant for women in poor households, because it will be costly to violate such norms, which often engage in the informal risk-sharing network within the village (Townsend (1994), Udry (1994)). Moreover, religious norms could potentially create strong barriers for women to work outside their village (Kabeer (2000); Salway et al. (2003); Kabeer and Mahmud (2004)). This barrier is strongly linked with the *purdah* practice observed in Muslim-majority countries. *Purdah* demands gender seclusion, both at home and outside, especially at the workplace. Breaching *purdah* could become a social taboo, not only for the migrated women outside their village, but for the entire family, especially in rural areas. Working in the RMG factories (even during the internship) under a mixed gender work environment naturally requires some contacts with male colleagues, which could have negative consequences for the female program participants in their home villages in terms of social status, reputation, and marriage market outcomes (Kabeer 2000). These traditional and religious norms create a strong barrier to labor market participation for women, even when the households suffer from extreme poverty (Amin 1997), which warrants targeted policy attention.

Our study is one of the few that find a substantial impact of training on employment, albeit only when combined with a stipend and an OJT program. There are two aspects of the results which need to be highlighted here. First, migration has a monetary cost, and credit constraint can have an impact. However, we also see that risk is another key constraint on migration. In our intervention setting, stipend reduces the credit constraints-related monetary cost; whereas the OJT reduces the risk. These findings demonstrate that stipends and OJT could help overcome frictions in this spatial gap, which has an important lesson for the policymakers. Our findings suggest that the efficacy of the vocational training program can be improved by combining OJT and financial stipend components, especially if the program targets disadvantaged youth of the developing countries.

## References

- Acevedo, P., Cruces, G., Gertler, P. and Martinez, S. (2017), Living up to expectations: How job training made women better off and men worse off, NBER Working Paper 23264, National Bureau of Economic Research.
- Ahmed, N. (2009), ‘Sustaining ready-made garment exports from Bangladesh’, *Journal of Contemporary Asia* **39**(4), 597–618.
- Amin, S. (1997), ‘The poverty–purdah trap in rural bangladesh: implications for women’s roles in the family’, *Development and Change* **28**(2), 213–233.
- Amin, S., Diamond, I., Naved, R. T. and Newby, M. (1998), ‘Transition to adulthood of female garment-factory workers in bangladesh’, *Studies in Family Planning* pp. 185–200.
- Attanasio, O., Kugler, A. and Meghir, C. (2011), ‘Subsidizing vocational training for disadvantaged youth in colombia: Evidence from a randomized trial’, *American Economic Journal: Applied Economics* **3**(3), 188–220.
- Bandiera, O., Burgess, R., Goldstein, M., Buehren, N., Gulesci, S., Rasul, I. and Sulaiman, M. (2014), ‘Women’s empowerment in action: evidence from a randomized control trial in Africa’.
- Banerjee, A. V. and Duflo, E. (2007), ‘The economic lives of the poor’, *Journal of Economic Perspectives* **21**(1), 141–167.
- Bank, W. (2013), Bangladesh-Poverty assessment: assessing a decade of progress in reducing poverty, 2000-2010, World Bank Other Operational Studies 16622, The World Bank.  
**URL:** <https://EconPapers.repec.org/RePEc:wbk:wbooper:16622>
- BBS (2015), *Population Distribution and Internal Migration in Bangladesh (Volume 6)*, Bangladesh Bureau of Statistics (BBS).
- Becker, G. S. (1962), ‘Investment in human capital: A theoretical analysis’, *Journal of Political Economy* **70**(5, Part 2), 9–49.
- Betcherman, G., Dar, A. and Olivas, K. (2004), *Impacts of active labor market programs: New evidence from evaluations with particular attention to developing and transition countries*, Social Protection, World Bank.
- Blattman, C. and Dercon, S. (2016), Occupational choice in early industrializing societies: Experimental evidence on the income and health effects of industrial and entrepreneurial work, NBER Working Paper 22683, National Bureau of Economic Research.

- Bloom, H. S., Orr, L. L., Bell, S. H., Cave, G., Doolittle, F., Lin, W. and Bos, J. M. (1997), ‘The benefits and costs of jtpa title ii-a programs: Key findings from the national job training partnership act study’, *Journal of Human Resources* pp. 549–576.
- Bryan, G., Chowdhury, S. and Mobarak, A. M. (2014), ‘Underinvestment in a profitable technology: The case of seasonal migration in Bangladesh’, *Econometrica* **82**, 1671–1758.
- Card, D., Ibararán, P., Regalia, F., Rosas-Shady, D. and Soares, Y. (2011), ‘The labor market impacts of youth training in the Dominican Republic’, *Journal of Labor Economics* **29**(2), 267–300.
- Card, D., Kluge, J. and Weber, A. (2017), ‘What works? a meta analysis of recent active labor market program evaluations’, *Journal of the European Economic Association* **Forthcoming**.
- Cho, Y., Kalomba, D., Mobarak, A. M. and Orozco, V. (2013), Gender differences in the effects of vocational training: Constraints on women and drop-out behavior, Policy Research Working Paper 6545, World Bank.  
**URL:** <http://documents.worldbank.org/curated/en/882971468272376091/Gender-differences-in-the-effects-of-vocational-training-constraints-on-women-and-drop-out-behavior>
- Chun, N. and Watanabe, M. (2012), ‘Can skill diversification improve welfare in rural areas? evidence from Bhutan’, *Journal of Development Effectiveness* **4**(2), 214–234.
- Dar, A., Abrahart, A., Ahmed, S., Rashed Al-Zayed, S., Khan, Q., Stopnitzky, Y., Savachenko, Y. and Tan, H. (2006), The Bangladesh vocational education and training system : an assessment, Working Paper 47042, World Bank, Washington, DC.  
**URL:** <http://documents.worldbank.org/curated/en/415391468207270005/The-Bangladesh-vocational-education-and-training-system-an-assessment>
- Duarte, M. and Restuccia, D. (2010), ‘The role of the structural transformation in aggregate productivity’, *The Quarterly Journal of Economics* **125**(1), 129–173.
- Dupas, P. and Robinson, J. (2013), ‘Savings constraints and microenterprise development: Evidence from a field experiment in Kenya’, *American Economic Journal: Applied Economics* **5**(1), 163–192.
- Dupas, P. and Robinson, J. (2013), ‘Why don’t the poor save more? evidence from health savings experiments’, *American Economic Review* **103**(4), 1138–1171.
- Filmer, D. and Fox, L. (2014), *Youth employment in sub-Saharan Africa*, World Bank Publications.

- Fox, L. and Kaul, U. (2017), ‘The evidence is in: How should youth employment programs in low-income countries be designed?’.
- Heath, R. (2011), *Why do firms hire using referrals? Evidence from Bangladeshi Garment Factories*, Yale University.
- Heath, R. and Mobarak, A. M. (2015), ‘Manufacturing growth and the lives of bangladeshi women’, *Journal of Development Economics* **115**, 1–15.
- Hicks, J. H., Kremer, M., Mbiti, I. and Miguel, E. (2015), ‘Vocational education in kenya-a randomized evaluation’, *3ie Grantee Final Report* .
- ILO (2013), *Seeking Better Employment Conditions for Better Socioeconomic Outcomes*, International Labor Organization (ILO) & International Institute for Labor Studies.
- Kabeer, N. (2000), ‘Social exclusion, poverty and discrimination towards an analytical framework’, *IDS bulletin* **31**(4), 83–97.
- Kabeer, N. and Mahmud, S. (2004), ‘Globalization, gender and poverty: Bangladeshi women workers in export and local markets’, *Journal of International Development* **16**(1), 93–109.
- Karlan, D. and Zinman, J. (2009), ‘Expanding credit access: Using randomized supply decisions to estimate the impacts’, *The Review of Financial Studies* **23**(1), 433–464.
- Kathuria, S. and Malouche, M. M. (2016), *Toward New Sources of Competitiveness in Bangladesh: Key Insights of the Diagnostic Trade Integration Study. Directions in Development–Trade*, World Bank Publications, Washington, DC: World Bank.
- Khandker, S. (2012), ‘Seasonality of income and poverty in Bangladesh’, *Journal of Development Economics* **97**, 244–256.
- Khandker, S. R. and Mahmud, W. (2012), *Seasonal hunger and public policies: evidence from Northwest Bangladesh*, World Bank Publications.
- Khosla, N. (2009), ‘The ready-made garments industry in bangladesh: A means to reducing gender-based social exclusion of women?’, *Journal of International Women’s Studies* **11**(1), 289.
- Kling, J. R., Liebman, J. B. and Katz, L. F. (2007), ‘Experimental analysis of neighborhood effects’, *Econometrica* **75**(1), 83–119.
- Kluve, J., Puerto, S., Robalino, D. A., Romero, J. M., Rother, F., Stöterau, J., Weidenkaff, F. and Witte, M. (2016), Do youth employment programs improve labor market outcomes? a systematic review, IZA Discussion Paper 10263, Institute of Labor Economics.

- LaLonde, R. J. (1995), ‘The promise of public sector-sponsored training programs’, *Journal of Economic Perspectives* **9**(2), 149–168.
- Lewis, W. A. (1954), ‘Economic development with unlimited supplies of labour’, *Manchester School* **22**(2), 139–191.
- Maitra, P. and Mani, S. (2017), ‘Learning and earning: Evidence from a randomized evaluation in India’, *Labour Economics* **45**, 116–130.
- McKenzie, D. (2017), ‘How effective are active labor market policies in developing countries? a critical review of recent evidence’, *World Bank Research Observer* **32**(2), 127–154.
- Oster, E. and Steinberg, B. M. (2013), ‘Do it service centers promote school enrollment? evidence from India’, *Journal of Development Economics* **104**, 123–135.
- Rahman, R. I. and Hossain, M. I. (2017), Labour market and skill gap analysis for readymade garments sector in Bangladesh, in ‘BIDS Study Report: Labour Market And Skill Gap in Bangladesh’, Skills for Employment Investment Program, Finance Division, Ministry of Finance, Dhaka: Bangladesh, chapter 2, pp. 27–48.
- Ryan, P. (2001), ‘The school-to-work transition: a cross-national perspective’, *Journal of Economic Literature* **39**(1), 34–92.
- Salway, S., Rahman, S. and Jesmin, S. (2003), ‘A profile of womens work participation among the urban poor of Dhaka’, *World Development* **31**(5), 881–901.
- Schochet, P. Z., Burghardt, J. and McConnell, S. (2008), ‘Does job corps work? impact findings from the national job corps study’, *The American economic review* **98**(5), 1864–1886.
- Schultz, T. W. (1961), ‘Investment in human capital’, *American economic review* **51**(1), 1–17.
- Shonchoy, A. S. (2015), ‘Seasonal migration and microcredit during agricultural lean seasons: Evidence from northwest bangladesh’, *The Developing Economies* **53**(1), 1–26.
- Townsend, R. M. (1994), ‘Risk and insurance in village india’, *Econometrica* pp. 539–591.
- Udry, C. (1994), ‘Risk and insurance in a rural credit market: An empirical investigation in northern nigeria’, *Review of Economic Studies* **61**(3), 495–526.
- World Bank, World Food Programme and Bangladesh Bureau of Statistics (2010), Poverty maps of Bangladesh 2010 : Key findings, Working Paper 90487, World Bank, Washington, DC.  
**URL:** <http://documents.worldbank.org/curated/en/916761468211763695/Key-findings>

Figure 1: Participation in the RMG sector from Rangpur region (using upper poverty line)

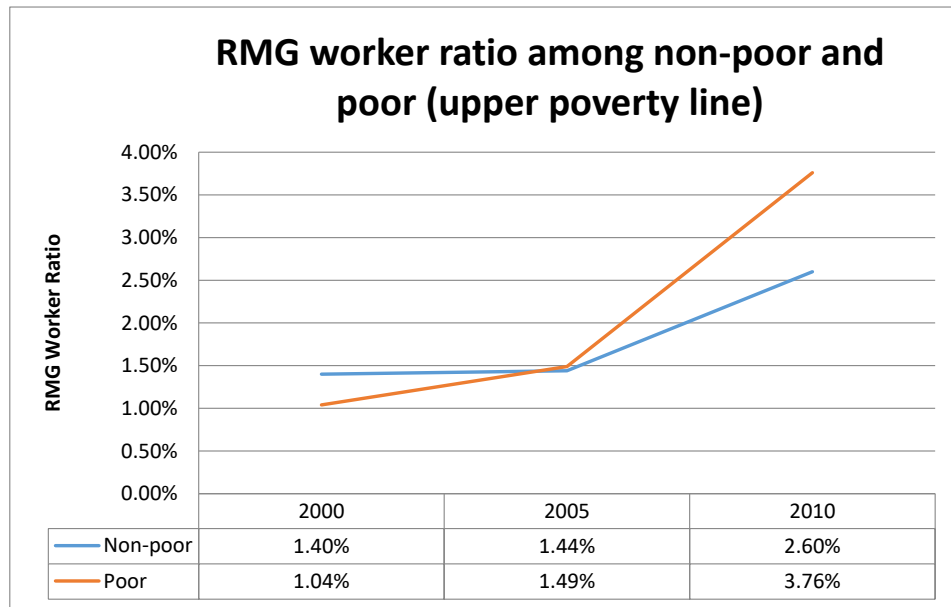
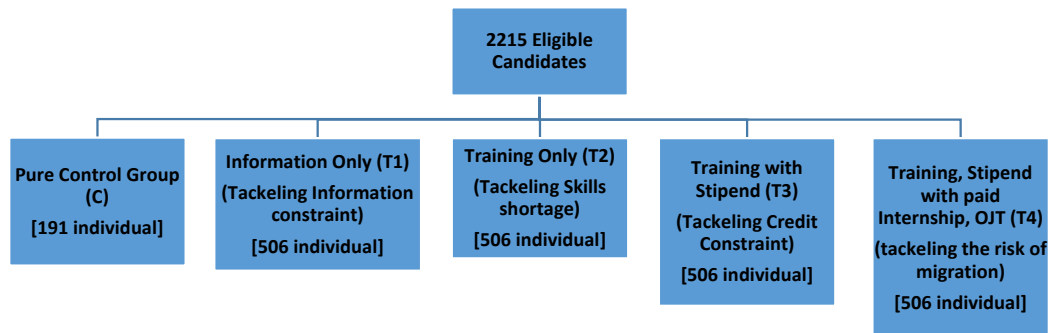
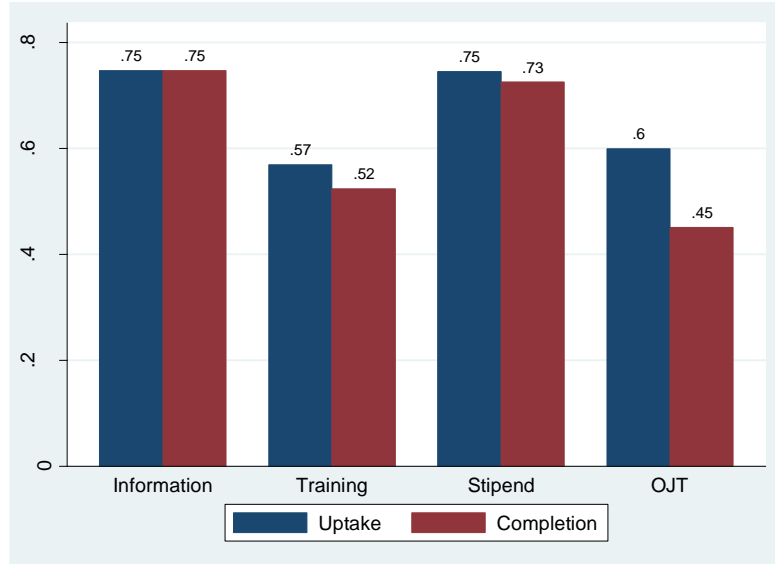


Figure 2: RCT Design

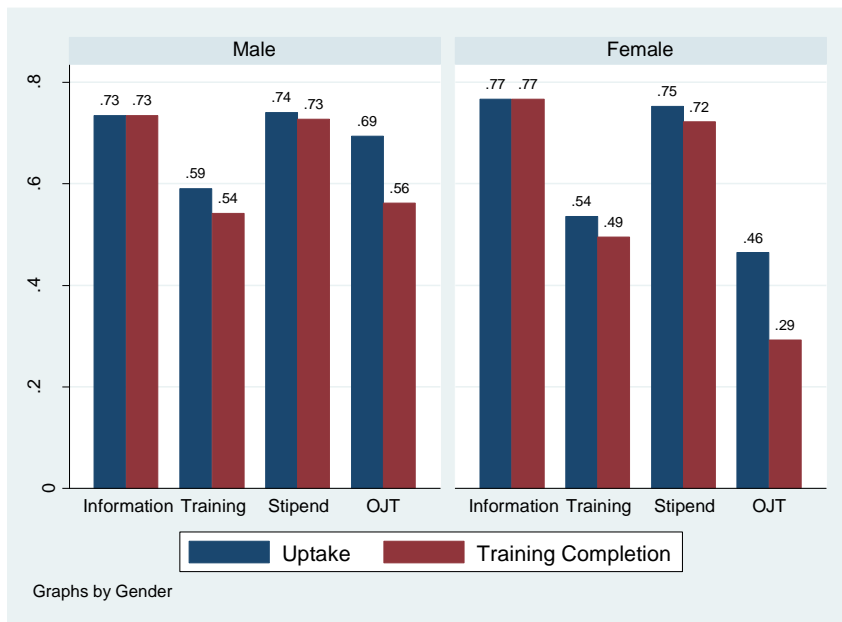




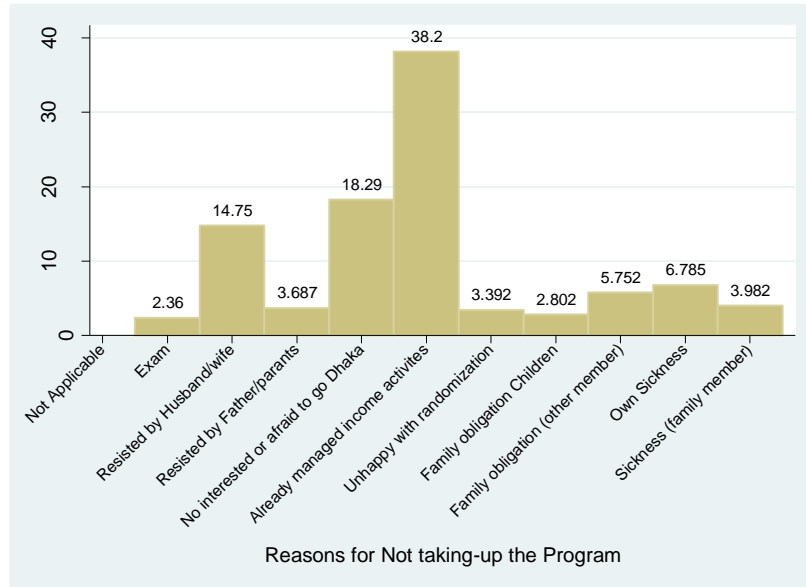
**Figure 3: Program uptake and completion rate**



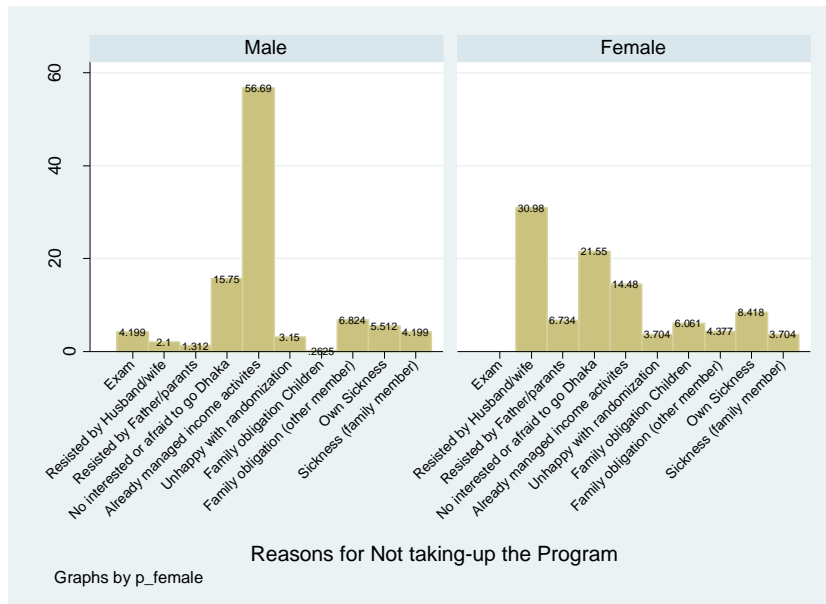
**Figure 4: Program uptake and completion rate by gender**



**Figure 5: Reasons for not taking up the program**



**Figure 6: Reasons for not taking up the program gender-wise**



**Table A: Project timeline and RCT Stratified Phase-in Design**

Baseline	Phase	Training Batch	Treatment Name	Start	End	Total sample assigned	Offer	Uptake	6 months follow-up	12 months panel	18 months follow-up
S e p t e m b e r  2 0 1 3	1	0	Information (T1)	15 Dec, 2013	25 Dec, 2013	518	114	100	Jun-14	Dec-14	Jun-15
		1	Training (T2)	04 Nov, 2013	25 Nov, 2013		114	70	May-14	Nov-14	May-15
		2	Stipend (T3)	01 Dec, 2013	22 Dec, 2013		114	87	Jun-14	Dec-14	Jun-15
		3	OJT (T4)	01 Jan, 2014	30 Jan, 2014		114	62	Jul-14	Jan-15	Jul-15
	2	0	Information (T1)	15 Mar, 2014	25 Mar, 2014	579	130	100	Sep-14	Mar-15	Sep-15
		4	Training (T2)	08 Feb, 2014	01 Mar, 2014		130	74	Aug-14	Feb-15	Aug-15
		5	Stipend (T3)	06 Mar, 2014	31 Mar, 2014		130	100	Sep-14	Mar-15	Sep-15
		6	OJT (T4)	03 Apr, 2014	30 Apr, 2014		130	78	Oct-14	Apr-15	Oct-15
	3	0	Information (T1)	15 Jun, 2014	25 Jun, 2014	570	135	85	Dec-14	Jun-15	Dec-15
		7	Training (T2)	11 May, 2014	01 Jun, 2014		135	61	Nov-14	May-15	Nov-15
		8	Stipend (T3)	07 Jun, 2014	28 Jun, 2014		135	100	Dec-14	Jun-15	Dec-15
		9	OJT (T4)	05 July, 2014	08 Aug, 2014		135	62	Jan-15	Jul-15	Jan-16
4	0	Information (T1)	18 Oct, 2014	25 Oct, 2014	548	127	93	Mar-15	Sep-15	Mar-16	
	10	Training (T2)	12 Aug, 2014	02 Sep, 2014		127	60	Feb-15	Aug-15	Feb-16	
	11	Stipend (T3)	11 Sep, 2014	08 Oct, 2014		127	80	Mar-15	Sep-15	Mar-16	
	12	OJT (T4)	16 Oct, 2014	06 Nov, 2014		127	56	Apr-15	Oct-15	Apr-16	

**Table B: Survey and attrition status**

<b>Treatments</b>	<b>6 months follow-up</b>	<b>12 months panel</b>	<b>18 months follow-up</b>
Control (C)	2.09	2.62	3.66
Information (T1)	3.36	2.76	5.73
Training (T2)	2.57	1.98	6.32
Training + Stipend (T3)	2.17	2.17	7.31
Training + Stipend + Internship (T4)	3.95	3.56	6.32
<b>Overall</b>	<b>2.93</b>	<b>2.62</b>	<b>6.19</b>

Table 1: Balance table with summary means

Variables	Mean of control group (C)	Beta coefficient of the balance test (OLS)							
		Information - Control (T1 - C)	S.E.	Training - Control (T2-C)	S.E.	Stipend - Control (T3 - C)	S.E.	OJT-Control (T4 - C)	S.E.
Age	FALSE	0.471	(0.643)	0.197	(0.559)	-0.232	(0.689)	-0.102	(0.605)
Sex (Female ==1)	0.30	0.117	(0.110)	0.021	(0.093)	0.038	(0.106)	0.054	(0.098)
Education: Primary	0.10	0.034	(0.062)	-0.025	(0.054)	0.039	(0.053)	0.054	(0.066)
Education: Secondary	0.47	-0.076	(0.090)	-0.039	(0.085)	-0.081	(0.093)	-0.063	(0.097)
Education: Higher Secondary	0.00	0.000	(0.001)	0.000	(0.001)	0.011	(0.010)	-0.001	(0.001)
Married	0.32	0.071	(0.085)	0.020	(0.062)	-0.043	(0.080)	-0.041	(0.064)
Belongs to a Ultra-poor household	0.52	-0.095	(0.087)	-0.062	(0.084)	-0.014	(0.072)	-0.084	(0.083)
No of Children in the household	0.43	0.182	(0.161)	0.152	(0.117)	0.057	(0.134)	0.041	(0.111)
Size of the household	3.99	0.041	(0.235)	-0.029	(0.212)	0.238	(0.212)	0.132	(0.177)
Participant is the head of the HH	0.21	-0.037	(0.064)	0.020	(0.059)	-0.070	(0.067)	-0.061	(0.053)
Food-shortage in Monga	0.37	0.093	(0.067)	0.024	(0.060)	0.097	(0.060)	0.089*	(0.053)
Size of Landholdings (in decimals)	2.26	-0.240	(0.195)	-0.291	(0.197)	-0.173	(0.224)	-0.152	(0.174)
Past profession: Wage Employment	0.17	0.023	(0.087)	0.044	(0.080)	-0.037	(0.065)	-0.036	(0.057)
Past profession: Self-employment	0.04	-0.011	(0.027)	-0.010	(0.022)	0.004	(0.032)	0.023	(0.029)
Past profession: Farming	0.04	-0.022	(0.041)	-0.024	(0.045)	0.016	(0.046)	-0.037	(0.044)
Past profession:Small business	0.03	0.014	(0.020)	0.016	(0.017)	0.012	(0.016)	-0.016	(0.023)
Profession: Unemployed	0.71	0.022	(0.097)	0.004	(0.083)	0.033	(0.086)	0.074	(0.068)
Religion is Muslim (dummy)	0.93	-0.029	(0.032)	-0.015	(0.019)	-0.055	(0.043)	-0.013	(0.023)
Risk Averse (dummy)	0.73	0.099*	(0.059)	0.050	(0.083)	0.009	(0.085)	0.061	(0.072)
Present Biased (dummy)	0.16	-0.020	(0.067)	-0.061	(0.053)	-0.072	(0.076)	0.002	(0.062)
P-value of F-test of joint significance		0.61		0.34		0.34		0.74	
Observation		697		697		697		697	

Notes: Figures in the parenthesis are standard errors.\*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. All regressions controlled for village and phase fixed effects with clustered standard errors at the village level. Regressions were done comparing each treatment with control sample. The F-test has been conducted having a particular treatment variables regressed against all the covariates.

**Table 2: Uptake decision of participants**

Dependent Variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Sample without control group						
	Sample with both gender				Male Only		Female
Training (T2)	-0.178*** (0.035)	-0.177*** (0.036)	-0.183*** (0.039)	-0.155*** (0.051)	-0.183*** (0.040)	-0.162*** (0.055)	-0.225*** (0.062)
Stipend (T3)	-0.002 (0.029)	-0.003 (0.029)	0.003 (0.031)	0.005 (0.039)	0.003 (0.031)	0.014 (0.040)	0.025 (0.054)
OJT (T4)	-0.148*** (0.031)	-0.150*** (0.032)	-0.142*** (0.035)	-0.044 (0.040)	-0.142*** (0.035)	-0.046 (0.042)	-0.284*** (0.064)
Female		-0.083** (0.035)	-0.070* (0.040)	0.013 (0.055)	-0.052 (0.060)		
Risk-averse			0.062** (0.026)	0.066** (0.026)	0.065* (0.033)	0.079** (0.035)	0.048 (0.046)
Present biased			-0.080** (0.035)	-0.079** (0.034)	-0.030 (0.042)	-0.021 (0.041)	-0.104* (0.057)
Female * (T2)				-0.072 (0.070)			
Female * (T3)				-0.002 (0.060)			
Female * (T4)				-0.243*** (0.067)			
Female * Risk averse					-0.002 (0.056)		
Female * Present biased					-0.130** (0.057)		
Observations	2,024	2,024	2,024	2,024	2,024	1,228	796
R-squared	0.04	0.06	0.22	0.23	0.22	0.26	0.33
Mean of the control group	0.75	0.75	0.75	0.75	0.75	0.74	0.77
P-value for joint significance	0.00	0.00	0.00	0.01	0.00	0.01	0.00
Cash effect: C = T3 - T2 (beta)	0.18	0.17	0.19	0.16	0.19	0.18	0.25
Cash effect: C = T3 - T2 (p-value)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apprenticeship: A = T4 - T3 (beta)	-0.15	-0.15	-0.15	-0.05	-0.15	-0.06	-0.31
Apprenticeship: A = T4 - T3 (p-value)	0.00	0.00	0.00	0.23	0.00	0.15	0.00
Control for Phase	√	√	√	√	√	√	√
Control for observables		√	√	√	√	√	√
Control for village				√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "Present-biased" is a dummy equal to 1 if the respondent exhibits a higher discount rate between today and one month from today than between three months from today and four months from today.

**Table 3: Training Completion decision of participants**

	(1)	(2)	(3)	(4)	(5)	(6)
	Sample without control and information group					
Dependent Variable: Training Completion (dummy)	Sample with both gender			Male Only	Female Only	
Stipend (T3)	0.202*** (0.036)	0.197*** (0.037)	0.203*** (0.041)	0.177*** (0.053)	0.194*** (0.058)	0.257*** (0.066)
OJT (T4)	-0.073** (0.034)	-0.073** (0.034)	-0.063* (0.038)	0.027 (0.049)	0.031 (0.054)	-0.207*** (0.052)
Female		-0.123*** (0.037)	-0.089** (0.043)	-0.036 (0.057)		
Risk-averse			0.040 (0.038)	0.043 (0.038)	0.087* (0.046)	0.030 (0.057)
Present biased			-0.068 (0.049)	-0.064 (0.047)	0.015 (0.056)	-0.102 (0.074)
Female * (T3)				0.072 (0.072)		
Female * (T4)				-0.218*** (0.067)		
Observations	1,518	1,518	1,518	1,518	919	599
R-squared	0.06	0.10	0.28	0.29	0.31	0.44
Mean of the control group	0.52	0.52	0.52	0.52	0.54	0.77
P-value for joint significance	0.00	0.00	0.00	0.00	0.00	0.00
Apprenticeship: A = T4 - T3 (beta)	-0.28	-0.27	-0.27	-0.15	-0.16	-0.46
Apprenticeship: A = T4 - T3 (p-value)	0.00	0.00	0.00	0.00	0.00	0.00
Control for Phase	√	√	√	√	√	√
Control for observables		√	√	√	√	√
Control for village			√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "Present-biased" is a dummy equal to 1 if the respondent exhibits a higher discount rate between today and one month from today than between three months from today and four months from today.

**Table 4: Non-uptake and non-completion reasoning**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<b>Non-uptake reasoning (top 2)</b>						<b>Training non-completion reasoning (top 1)</b>		
	Family restriction			Already managed income activity			Afraid to go to Dhaka		
	Sample without control			Sample without control			Sample without control and info group		
	Both Gender	Male Only	Female Only	Both Gender	Male Only	Female Only	Both Gender	Male Only	Female Only
Training (T2)	0.076*** (0.016)	0.013 (0.010)	0.183*** (0.038)	0.095*** (0.029)	0.165*** (0.042)	-0.014 (0.028)			
Stipend (T3)	0.014 (0.012)	-0.008 (0.007)	0.040 (0.033)	0.013 (0.022)	0.028 (0.034)	-0.019 (0.025)	0.001 (0.007)	-0.003 (0.009)	0.014 (0.017)
OJT (T4)	0.079*** (0.017)	0.004 (0.009)	0.192*** (0.043)	0.049** (0.025)	0.047 (0.034)	0.052 (0.036)	0.043*** (0.015)	0.031 (0.024)	0.063** (0.024)
Female	0.122*** (0.025)			-0.117*** (0.025)			-0.012 (0.013)		
Observations	2,024	1,228	796	2,024	1,228	796	1,518	919	599
R-squared	0.23	0.12	0.32	0.18	0.23	0.26	0.22	0.32	0.32
Mean of the control group	0.02	0.01	0.05	0.09	0.13	0.04	0.01	0.02	0.01
P-value for joint significance	0.00	0.25	0.00	0.01	0.00	0.19	0.01	0.24	0.03
Cash effect: C = T3 - T2 (beta)	-0.06	-0.02	-0.14	-0.08	-0.14	0.00			
Cash effect: C = T3 - T2 (p-value)	0.00	0.04	0.01	0.01	0.01	0.88			
Apprenticeship: A = T4 - T3 (beta)	0.07	0.01	0.15	0.04	0.02	0.07	0.04	0.03	0.05
Apprenticeship: A = T4 - T3 (p-value)	0.00	0.18	0.00	0.18	0.63	0.04	0.00	0.11	0.02
Control for Phase	√	√	√	√	√	√	√	√	√
Control for observables	√	√	√	√	√	√	√	√	√
Control for village	√	√	√	√	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level.\*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "Present-biased" is a dummy equal to 1 if the respondent exhibits a higher discount rate between today and one month from today than between three months from today and four months from today.



**Table 5: Employment status on participants in appeal sector (6 months after the intervention) [ITT and ToT estimation]**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Migrated within 6 months of intervention (First Stage)	Currently employed in a factory job	Got Employed in the RMG sector	At least employed for a month in the last 6 months in any sector	Sent remittance atleast once in the last 6 months	Employment Index (combining variables of column 2-5)
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>						
Information (T1)	0.017 (0.033)	-0.000 (0.022)	-0.011 (0.029)	0.020 (0.040)	-0.015 (0.026)	-0.022 (0.132)
Training (T2)	0.071** (0.033)	0.008 (0.020)	0.018 (0.028)	0.030 (0.035)	0.017 (0.025)	0.098 (0.116)
Stipend (T3)	0.184*** (0.034)	0.062*** (0.019)	0.084*** (0.029)	0.130*** (0.035)	0.069*** (0.024)	0.468*** (0.117)
OJT (T4)	0.368*** (0.039)	0.171*** (0.026)	0.219*** (0.034)	0.282*** (0.036)	0.213*** (0.032)	1.225*** (0.149)
Sex (Female ==1)	-0.135*** (0.027)	-0.076*** (0.024)	-0.066*** (0.022)	-0.194*** (0.028)	-0.111*** (0.022)	-0.580*** (0.114)
Observations	2,142	2,142	2,142	2,142	2,142	2,142
R-squared	0.28	0.20	0.21	0.22	0.23	0.24
Mean of the control group	0.06	0.05	0.03	0.11	0.04	0.00
P-value for joint significance	0.00	0.00	0.00	0.00	0.00	0.00
Info effect: (I) = T1 - C (beta)	0.02	0.00	-0.01	0.02	-0.02	-0.02
Info effect: (I) = T1 - C (p-value)	0.61	1.00	0.72	0.61	0.56	0.87
Job-Training effect: (J) = T2 - T1 (beta)	0.05	0.01	0.03	0.01	0.03	0.12
Job-Training effect: (J) = T2 - T1 (p-value)	0.03	0.69	0.11	0.72	0.06	0.20
Cash effect: (C) = T3 - T2 (beta)	0.11	0.05	0.07	0.10	0.05	0.37
Cash effect: (C) = T3 - T2 (p-value)	0.00	0.01	0.01	0.00	0.01	0.00
Apprenticeship: (A) = T4 - T3 (beta)	0.18	0.11	0.14	0.15	0.14	0.76
Apprenticeship: (A) = T4 - T3 (p-value)	0.00	0.00	0.00	0.00	0.00	0.00
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>						
Migrated (within 6 months)		0.497*** (0.044)	0.647*** (0.046)	0.774*** (0.048)	0.636*** (0.049)	3.561*** (0.199)
Sex (Female ==1)		-0.009 (0.018)	0.022 (0.018)	-0.090*** (0.021)	-0.024 (0.018)	-0.099 (0.074)
Observations		2,142	2,142	2,142	2,142	2,142
R-squared		0.520	0.508	0.489	0.408	0.601
Control for Phase		√	√	√	√	√
Control for observables		√	√	√	√	√
Control for village		√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

**Table 6: Employment and wage of participants in Apperal Sector (6 months after the intervention) [ITT and ToT estimation]**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Months of employment	Sum of total wage income in the last 6	Average working hours	Average wage income	Wage income last month	Working hours last month
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>						
Information (T1)	0.174 (0.184)	750.257 (1,218.922)	0.224 (0.275)	125.043 (203.154)	64.915 (217.420)	-0.030 (0.356)
Training (T2)	0.275* (0.163)	1,707.345 (1,077.098)	0.429* (0.241)	284.558 (179.516)	22.249 (214.897)	0.053 (0.325)
Stipend (T3)	0.504*** (0.154)	3,791.694*** (1,063.179)	0.749*** (0.227)	631.949*** (177.197)	481.736* (245.913)	0.352 (0.291)
OJT (T4)	1.232*** (0.168)	8,947.121*** (1,189.323)	1.996*** (0.264)	1,491.187*** (198.220)	1,151.993*** (247.534)	1.656*** (0.350)
Sex (Female ==1)	-0.829*** (0.144)	-6,561.402*** (1,026.641)	-1.334*** (0.210)	-1,093.567*** (171.107)	-846.746*** (201.291)	-1.303*** (0.258)
Observations	2,142	2,142	2,142	2,142	2,142	2,142
R-squared	0.22	0.24	0.22	0.24	0.19	0.20
Mean of the control group	0.42	2939.00	0.60	489.90	545.50	0.85
P-value for joint significance	0.00	0.00	0.00	0.00	0.00	0.00
Info effect: (I) = T1 - C (beta)	0.17	750.30	0.22	125.00	64.91	-0.03
Info effect: (I) = T1 - C (p-value)	0.35	0.54	0.42	0.54	0.77	0.93
Job-Training effect: (J) = T2 - T1 (beta)	0.10	957.10	0.21	159.50	-42.67	0.08
Job-Training effect: (J) = T2 - T1 (p-value)	0.50	0.33	0.35	0.33	0.80	0.73
Cash effect: (C) = T3 - T2 (beta)	0.23	2084.00	0.32	347.40	459.50	0.30
Cash effect: (C) = T3 - T2 (p-value)	0.07	0.03	0.09	0.03	0.03	0.18
Apprenticeship: (A) = T4 - T3 (beta)	0.73	5155.00	1.25	859.20	670.30	1.30
Apprenticeship: (A) = T4 - T3 (p-value)	0.00	0.00	0.00	0.00	0.01	0.00
Control for Phase	√	√	√	√	√	√
Control for observables	√	√	√	√	√	√
Control for village	√	√	√	√	√	√
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>						
Migrated (within 6 months)	3.049*** (0.295)	23,436.222*** (2,210.600)	5.033*** (0.468)	3,906.037*** (368.433)	3,286.517*** (467.810)	4.780*** (0.565)
Sex (Female ==1)	-0.413*** (0.129)	-3,375.001*** (852.181)	-0.646*** (0.184)	-562.500*** (142.030)	-403.973** (170.633)	-0.652*** (0.218)
Observations	2,142	2,142	2,142	2,142	2,142	2,142
R-squared	0.331	0.336	0.364	0.336	0.271	0.339
Control for staritification	√	√	√	√	√	√
Control for observables	√	√	√	√	√	√
Control for village	√	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clusterd at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

**Table 7: Remittance status of participants (6 months after the intervention) [ITT and ToT estimation]**

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	# Months of remittance	Total remitted amount	#Avg remitted amount	Did you remit last month	Last remitted amount	Remittance Index (Combining column 1 -5)
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>						
Information (T1)	-0.071 (0.075)	-250.999 (235.842)	-5.381 (88.772)	-0.015 (0.021)	-28.350 (66.945)	-0.079 (0.118)
Training (T2)	0.078 (0.076)	308.812 (296.414)	143.585 (125.486)	0.015 (0.023)	74.014 (76.158)	0.151 (0.136)
Stipend (T3)	0.173** (0.074)	790.120*** (281.941)	344.695*** (102.098)	0.049** (0.020)	241.207*** (79.804)	0.410*** (0.126)
OJT (T4)	0.663*** (0.093)	1,993.479*** (318.074)	752.807*** (126.981)	0.153*** (0.028)	498.496*** (94.483)	1.062*** (0.154)
Sex (Female ==1)	-0.293*** (0.077)	-1,526.940*** (386.342)	-471.661*** (99.399)	-0.077*** (0.020)	-364.499*** (91.650)	-0.645*** (0.144)
Observations	2,142	2,142	2,142	2,142	2,142	2,142
R-squared	0.22	0.20	0.16	0.21	0.17	0.21
Mean of the control group	0.12	397.90	120.40	0.03	69.52	0.00
P-value for joint significance	0.00	0.00	0.00	0.00	0.00	0.00
Info effect: (I) = T1 - C (beta)	-0.07	-251.00	-5.38	-0.02	-28.35	-0.08
Info effect: (I) = T1 - C (p-value)	0.34	0.29	0.95	0.48	0.67	0.50
Job-Training effect: (J) = T2 - T1 (beta)	0.15	559.80	149.00	0.03	102.40	0.23
Job-Training effect: (J) = T2 - T1 (p-value)	0.02	0.01	0.05	0.04	0.03	0.02
Cash effect: (C) = T3 - T2 (beta)	0.10	481.30	201.10	0.03	167.20	0.26
Cash effect: (C) = T3 - T2 (p-value)	0.18	0.16	0.06	0.08	0.07	0.07
Apprenticeship: (A) = T4 - T3 (beta)	0.49	1203.00	408.10	0.10	257.30	0.65
Apprenticeship: (A) = T4 - T3 (p-value)	0.00	0.00	0.00	0.00	0.00	0.00
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>						
Migrated (within 6 months)	1.971*** (0.185)	6,026.321*** (585.546)	2,105.614*** (171.631)	0.460*** (0.052)	1,467.104*** (187.754)	3.122*** (0.276)
Sex (Female ==1)	-0.025 (0.066)	-711.946** (339.534)	-186.676** (86.462)	-0.015 (0.018)	-166.858** (79.651)	-0.222* (0.121)
Observations	2,142	2,142	2,142	2,142	2,142	2,142
R-squared	0.319	0.242	0.259	0.353	0.235	0.320
Control for Phase	√	√	√	√	√	√
Control for observables	√	√	√	√	√	√
Control for village	√	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

**Table 8: Financial, Physical and Emotional wellbeing indicators of participants (6 months after the intervention) [ITT and ToT estimation]**

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Savings Index	Borrowing Index	Work Physical Stress Index	Family Stress Index	Stress not related to family or work
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>					
Information (T1)	0.190 (0.146)	0.105 (0.112)	-0.180 (0.136)	-0.324** (0.151)	0.134 (0.152)
Training (T2)	0.155 (0.144)	-0.038 (0.123)	-0.239 (0.147)	-0.298* (0.159)	0.210 (0.144)
Stipend (T3)	0.405** (0.156)	0.055 (0.116)	-0.240* (0.138)	-0.414*** (0.154)	0.235 (0.148)
OJT (T4)	0.331** (0.158)	-0.174 (0.130)	-0.163 (0.144)	-0.391** (0.156)	0.183 (0.151)
Sex (Female ==1)	-0.260*** (0.081)	-0.068 (0.066)	0.099 (0.071)	0.049 (0.083)	-0.089 (0.081)
Observations	2,142	2,142	2,142	2,142	2,142
R-squared	0.20	0.15	0.19	0.20	0.20
Mean of the control group	0.00	0.00	0.00	0.00	0.00
P-value for joint significance	0.02	0.00	0.24	0.04	0.43
Info effect: (I) = T1 - C (beta)	0.19	0.11	-0.18	-0.32	0.13
Info effect: (I) = T1 - C (p-value)	0.19	0.35	0.19	0.03	0.38
Job-Training effect: (J) = T2 - T1 (beta)	-0.04	-0.14	-0.06	0.03	0.08
Job-Training effect: (J) = T2 - T1 (p-value)	0.65	0.08	0.44	0.70	0.36
Cash effect: (C) = T3 - T2 (beta)	0.25	0.09	0.00	-0.12	0.03
Cash effect: (C) = T3 - T2 (p-value)	0.00	0.29	1.00	0.06	0.77
Apprenticeship: (A) = T4 - T3 (beta)	-0.07	-0.23	0.08	0.02	-0.05
Apprenticeship: (A) = T4 - T3 (p-value)	0.33	0.00	0.22	0.71	0.49
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>					
Migrated (within 6 months)	0.587*** (0.204)	-0.612*** (0.192)	0.025 (0.157)	-0.362** (0.176)	0.143 (0.204)
Sex (Female ==1)	-0.183** (0.083)	-0.153** (0.072)	0.101 (0.066)	-0.002 (0.078)	-0.068 (0.075)
Observations	2,142	2,142	2,142	2,142	2,142
R-squared	0.166	0.093	0.189	0.196	0.195
Control for Phase	√	√	√	√	√
Control for observables	√	√	√	√	√
Control for village	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

**Table 9: Overall HH Socio-economic status based in indices ((12 months after the intervention) [ITT and ToT estimation])**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	HH Health Index	HH Food Vulnerability Index	HH Asset Index	HH Livestock Index	HH Housing Condition Index	HH Savings Index	HH Borrowing Index
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>							
Information (T1)	-0.145 (0.134)	0.032 (0.081)	0.165 (0.117)	0.013 (0.157)	0.005 (0.132)	0.079 (0.237)	0.097 (0.155)
Training (T2)	-0.168 (0.133)	-0.050 (0.074)	0.153 (0.100)	0.111 (0.150)	0.093 (0.130)	0.167 (0.185)	0.096 (0.149)
Stipend (T3)	-0.109 (0.137)	-0.018 (0.075)	0.152 (0.108)	0.159 (0.173)	0.030 (0.141)	0.506* (0.272)	0.080 (0.157)
OJT (T4)	-0.157 (0.127)	-0.017 (0.077)	0.212** (0.104)	0.112 (0.152)	0.057 (0.138)	0.044 (0.216)	0.043 (0.140)
Sex (Female ==1)	0.023 (0.064)	0.111 (0.069)	-0.032 (0.080)	-0.099 (0.076)	-0.191*** (0.054)	0.109 (0.240)	-0.026 (0.102)
Observations	2,189	2,189	2,189	2,189	2,189	2,189	2,189
R-squared	0.30	0.54	0.48	0.27	0.41	0.23	0.28
Mean of the control group	0.00	0.00	0.00	0.00	0.00	0.00	0.00
P-value for joint significance	0.62	0.64	0.34	0.29	0.37	0.33	0.95
Info effect: (I) = T1 - C (beta)	-0.15	0.03	0.17	0.01	0.00	0.08	0.10
Info effect: (I) = T1 - C (p-value)	0.28	0.69	0.16	0.93	0.97	0.74	0.53
Job-Training effect: (J) = T2 - T1 (beta)	-0.02	-0.08	-0.01	0.10	0.09	0.09	0.00
Job-Training effect: (J) = T2 - T1 (p-value)	0.74	0.12	0.84	0.11	0.05	0.48	1.00
Cash effect: (C) = T3 - T2 (beta)	0.06	0.03	0.00	0.05	-0.06	0.34	-0.02
Cash effect: (C) = T3 - T2 (p-value)	0.34	0.49	0.98	0.51	0.20	0.27	0.84
Apprenticeship: (A) = T4 - T3 (beta)	-0.05	0.00	0.06	-0.05	0.03	-0.46	-0.04
Apprenticeship: (A) = T4 - T3 (p-value)	0.43	0.99	0.45	0.59	0.52	0.19	0.65
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>							
Migrated (within 6 months)	0.006 (0.139)	-0.036 (0.135)	0.166 (0.223)	0.244 (0.179)	0.031 (0.122)	-0.147 (0.264)	-0.166 (0.204)
Sex (Female ==1)	0.025 (0.064)	0.094 (0.068)	0.004 (0.094)	-0.065 (0.081)	-0.190*** (0.057)	0.042 (0.217)	-0.044 (0.090)
Observations	2,120	2,120	2,120	2,120	2,120	2,120	2,120
R-squared	0.309	0.546	0.469	0.252	0.412	0.223	0.277
Control for Phase	√	√	√	√	√	√	√
Control for observables	√	√	√	√	√	√	√
Control for village	√	√	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

Table 10: Poverty measures on rural households (12 months after the intervention) [ITT and ToT estimation]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Below Poverty (participant's income)	Below Poverty (HH income) with HH's reported remittance	Below Poverty (HH income) with participant's reported remittance	Below Poverty (HH food expenditure)	Below Poverty (HH food consumption expenditure)	Below Poverty (HH non-food expenditure)	Below Poverty (HH non-food consumption expenditure)
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>							
Information (T1)	-0.067 (0.048)	-0.080 (0.055)	-0.087* (0.051)	-0.054 (0.036)	-0.054 (0.036)	-0.016 (0.019)	-0.016 (0.019)
Training (T2)	-0.067 (0.048)	-0.031 (0.058)	-0.043 (0.053)	-0.056 (0.039)	-0.056 (0.039)	-0.018 (0.017)	-0.018 (0.017)
Stipend (T3)	-0.100** (0.047)	-0.044 (0.060)	-0.066 (0.056)	-0.047 (0.035)	-0.047 (0.035)	-0.013 (0.018)	-0.013 (0.018)
OJT (T4)	-0.170*** (0.048)	-0.094* (0.056)	-0.120** (0.052)	-0.049 (0.041)	-0.049 (0.041)	-0.029 (0.021)	-0.029 (0.021)
Sex (Female ==1)	0.267*** (0.034)	0.036 (0.032)	0.052 (0.034)	0.013 (0.023)	0.013 (0.023)	-0.023** (0.011)	-0.023** (0.011)
Observations	2,189	2,189	2,189	2,189	2,189	2,189	2,189
R-squared	0.304	0.215	0.216	0.244	0.244	0.164	0.164
Mean of the control group	0.728	0.665	0.681	0.895	0.895	0.963	0.963
P-value for joint significance	0.00	0.11	0.07	0.64	0.64	0.42	0.42
Info effect: (I) = T1 - C (beta)	-0.07	-0.08	-0.09	-0.05	-0.05	-0.02	-0.02
Info effect: (I) = T1 - C (p-value)	0.17	0.15	0.09	0.14	0.14	0.39	0.39
Job-Training effect: (J) = T2 - T1 (beta)	0.00	0.05	0.04	0.00	0.00	0.00	0.00
Job-Training effect: (J) = T2 - T1 (p-value)	0.99	0.14	0.17	0.92	0.92	0.79	0.79
Cash effect: (C) = T3 - T2 (beta)	-0.03	-0.01	-0.02	0.01	0.01	0.01	0.01
Cash effect: (C) = T3 - T2 (p-value)	0.23	0.68	0.49	0.64	0.64	0.40	0.40
Apprenticeship: (A) = T4 - T3 (beta)	-0.07	-0.05	-0.05	0.00	0.00	-0.02	-0.02
Apprenticeship: (A) = T4 - T3 (p-value)	0.01	0.13	0.12	0.94	0.94	0.10	0.10
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>							
Migrated (within 6 months)	-0.347*** (0.071)	-0.095 (0.078)	-0.163** (0.079)	-0.011 (0.048)	-0.011 (0.048)	-0.038 (0.026)	-0.038 (0.026)
Sex (Female ==1)	0.228*** (0.034)	0.025 (0.035)	0.038 (0.037)	0.019 (0.025)	0.019 (0.025)	-0.030** (0.013)	-0.030** (0.013)
Observations	2,120	2,120	2,120	2,120	2,120	2,120	2,120
R-squared	0.366	0.213	0.223	0.253	0.253	0.147	0.147
Control for Phase	√	√	√	√	√	√	√
Control for observables	√	√	√	√	√	√	√
Control for village	√	√	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

**Table 11: Shock and Network measures on rural households (12 months after the intervention) [ITT and ToT estimation]**

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Coping with Seasonal Shock			Intra-HH Spillover	
	Remittance during Monga	Remittance frequency during Monga	Total remittance during Monga	# of HH members currently working in urban location	Total income of other HH members working in Urban location
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>					
Information (T1)	-0.032 (0.040)	-0.031 (0.040)	-132.379 (163.754)	0.050 (0.040)	6,031.144 (4,014.886)
Training (T2)	0.019 (0.045)	0.015 (0.046)	81.975 (199.293)	0.065 (0.041)	7,997.497** (3,948.176)
Stipend (T3)	0.030 (0.050)	0.027 (0.050)	73.808 (189.224)	0.072* (0.040)	7,954.447* (4,109.848)
OJT (T4)	0.175*** (0.045)	0.183*** (0.046)	541.662*** (191.800)	0.091** (0.044)	9,963.337** (4,241.684)
Sex (Female ==1)	-0.098*** (0.032)	-0.105*** (0.033)	-465.220*** (118.805)	0.062* (0.033)	4,284.944 (3,055.033)
Observations	2,185	2,185	2,185	2,189	2,189
R-squared	0.19	0.19	0.18	0.19	0.19
Mean of the control group	0.07	0.07	251.30	0.11	10717.00
P-value for joint significance	0.00	0.00	0.00	0.18	0.12
Info effect: (I) = T1 - C (beta)	-0.03	-0.03	-132.40	0.05	6031.00
Info effect: (I) = T1 - C (p-value)	0.42	0.44	0.42	0.22	0.13
Job-Training effect: (J) = T2 - T1 (beta)	0.05	0.05	214.40	0.02	1966.00
Job-Training effect: (J) = T2 - T1 (p-value)	0.11	0.17	0.07	0.54	0.37
Cash effect: (C) = T3 - T2 (beta)	0.01	0.01	-8.17	0.01	-43.05
Cash effect: (C) = T3 - T2 (p-value)	0.76	0.73	0.95	0.80	0.99
Apprenticeship: (A) = T4 - T3 (beta)	0.15	0.16	467.90	0.02	2009.00
Apprenticeship: (A) = T4 - T3 (p-value)	0.00	0.00	0.00	0.40	0.35
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>					
Migrated (within 6 months)	0.565*** (0.083)	0.588*** (0.087)	1,789.581*** (300.360)	0.134** (0.058)	12,005.532** (5,428.104)
Sex (Female ==1)	-0.036 (0.031)	-0.039 (0.032)	-261.329** (112.117)	0.075** (0.033)	5,393.080* (2,988.139)
Observations	2,120	2,120	2,120	2,120	2,120
R-squared	0.278	0.276	0.253	0.199	0.201
Control for Phase	√	√	√	√	√
Control for observables	√	√	√	√	√
Control for village	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

**Table 12: Employment status on participants (18 months after the intervention) [ITT and ToT estimation]**

VARIABLES	(1) Currently Working	(2) Got an Employed in the RMG sector	(3) Atleast employed for a month in the last 6 months	(4) Atleast sent remittance once in the last 6 months	(5) Employment Index (combining variables of column 2-5)
<b>PANEL A: Intention -to-Treat (ITT) Estimates</b>					
Information (T1)	-0.006 (0.022)	0.118* (0.060)	0.107* (0.056)	0.015 (0.028)	0.171 (0.143)
Training (T2)	0.003 (0.026)	0.113* (0.064)	0.101* (0.060)	0.016 (0.030)	0.195 (0.164)
Stipend (T3)	0.025 (0.026)	0.125** (0.061)	0.106* (0.058)	0.068** (0.034)	0.409** (0.167)
OJT (T4)	0.056** (0.025)	0.203*** (0.064)	0.190*** (0.059)	0.123*** (0.032)	0.720*** (0.162)
Sex (Female ==1)	-0.010 (0.017)	-0.366*** (0.027)	-0.396*** (0.026)	-0.066*** (0.021)	-0.551*** (0.102)
Observations	2,154	2,215	2,154	2,154	2,154
R-squared	0.152	0.313	0.334	0.195	0.218
Mean of the control group	0.0214	0.272	0.257	0.0428	0
P-value for joint significance	0.00205	0.00290	0.00153	0	0
Info effect: (I) = T1 - C (beta)	-0.00583	0.118	0.107	0.0152	0.171
Info effect: (I) = T1 - C (p-value)	0.792	0.0514	0.0575	0.589	0.233
Job-Training effect: (J) = T2 - T1 (beta)	0.00863	-0.00515	-0.00624	0.000860	0.0237
Job-Training effect: (J) = T2 - T1 (p-value)	0.520	0.868	0.842	0.956	0.782
Cash effect: (C) = T3 - T2 (beta)	0.0218	0.0117	0.00551	0.0518	0.214
Cash effect: (C) = T3 - T2 (p-value)	0.211	0.684	0.842	0.00606	0.0312
Apprenticeship: (A) = T4 - T3 (beta)	0.0312	0.0782	0.0837	0.0554	0.311
Apprenticeship: (A) = T4 - T3 (p-value)	0.0849	0.00635	0.00334	0.0164	0.00924
<b>PANEL B: Instrumental Variable (ToT) Estimates</b>					
Ever migrated (within 6 months)	0.497*** (0.044)	0.647*** (0.046)	0.774*** (0.048)	0.636*** (0.049)	3.561*** (0.199)
Sex (Female ==1)	-0.009 (0.018)	0.022 (0.018)	-0.090*** (0.021)	-0.024 (0.018)	-0.099 (0.074)
Observations	2,142	2,142	2,142	2,142	2,142
R-squared	0.520	0.508	0.489	0.408	0.601
Control for Phase	√	√	√	√	√
Control for observables	√	√	√	√	√
Control for village	√	√	√	√	√

Notes: Figures in the parenthesis are standard errors clustered at the village level. \*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.



Table 13: Spillover effect of the treatment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Ever migrated within 6 months after treatment	Ever migrated within 18 months after treatment	Ever worked outside within 6 months after treatment	Ever worked outside within 18 months after treatment	Ever worked in RMG sector within 6 months after treatment	Ever worked in RMG sector within 18 months after treatment	Employment status 6 months after	Employment status 18 months after
Ratio of "Info (T1)" to total sample in the village	0.210** (0.084)	0.071 (0.095)	0.129 (0.083)	0.045 (0.094)	0.071 (0.059)	-0.056 (0.059)	0.082 (0.056)	0.048 (0.072)
Ratio of "Training (T2)" to total sample in the village	0.271*** (0.093)	0.263** (0.103)	0.148 (0.092)	0.160 (0.101)	0.108 (0.074)	0.123 (0.075)	0.118* (0.071)	0.136 (0.084)
Ratio of "Stipend (T3)" to total sample in the village	0.261*** (0.082)	0.234** (0.096)	0.233*** (0.084)	0.220** (0.096)	0.085 (0.057)	0.057 (0.066)	0.065 (0.054)	0.137* (0.077)
Ratio of "OJT (T4)" to total sample in the village	0.357*** (0.090)	0.262*** (0.093)	0.276*** (0.090)	0.185** (0.094)	0.162** (0.075)	0.145** (0.074)	0.253*** (0.074)	0.223*** (0.085)
Observations	2,215	2,215	2,215	2,215	2,215	2,215	2,215	2,215
R-squared	0.068	0.172	0.045	0.167	0.029	0.043	0.022	0.025
Control Mean	0.141	0.423	0.154	0.410	0.0641	0.0641	0.0385	0.0897
P-value for joint significance	0.00	0.00	0.00	0.02	0.00	0.03	0.00	0.00
Info effect: (I) = T1 - C (beta)	0.21	0.07	0.13	0.04	0.07	-0.06	0.08	0.05
Info effect: (I) = T1 - C (p-value)	0.01	0.45	0.12	0.63	0.23	0.35	0.14	0.50
Job-Training effect: (J) = T2 - T1 (beta)	0.06	0.19	0.02	0.12	0.04	0.18	0.04	0.09
Job-Training effect: (J) = T2 - T1 (p-value)	0.63	0.16	0.88	0.40	0.71	0.06	0.69	0.43
Cash effect: (C) = T3 - T2 (beta)	-0.01	-0.03	0.08	0.06	-0.02	-0.07	-0.05	0.00
Cash effect: (C) = T3 - T2 (p-value)	0.94	0.84	0.52	0.67	0.83	0.53	0.59	0.99
Apprenticeship: (A) = T4 - T3 (beta)	0.10	0.03	0.04	-0.04	0.08	0.09	0.19	0.09
Apprenticeship: (A) = T4 - T3 (p-value)	0.42	0.83	0.73	0.79	0.41	0.36	0.04	0.46
Control for Phase	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for observables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses. Significance code: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

**Table 1A: Summary Statistics**

Variables	Mean	SD	Min	Max
Age	22.42	4.33	18	35
Sex (Female ==1)	0.39	0.49	0	1
Education: Primary	0.14	0.35	0	1
Education: Secondary	0.39	0.49	0	1
Education: Higher Secondary	0.01	0.08	0	1
Married	0.37	0.48	0	1
Belongs to a Ultra-poor household	0.57	0.49	0	1
No of Children in the household	0.52	0.84	0	5
Size of the household	4.19	1.39	0	12
Participant is the head of the HH	0.16	0.37	0	1
Food-shortage in Monga	0.31	0.46	0	1
Size of Landholdings (in decimals)	2.13	1.19	0	5
Past profession: Wage Employment	0.17	0.38	0	1
Past profession: Self-employment	0.04	0.20	0	1
Past profession: Farming	0.05	0.22	0	1
Past profession:Small business	0.01	0.12	0	1
Profession: Unemployed	0.71	0.45	0	1
Religion is Muslim (dummy)	0.94	0.24	0	1
Risk Averse (dummy)	0.74	0.44	0	1
Present Biased (dummy)	0.13	0.33	0	1

**Table 1B: Attrition Probability**

	(1)	(2)	(3)	(4)
VARIABLES	Attrition during the 6-month follow-up (participant)	Attrition during the 12-month panel survey (HH)	Attrition during the 12-month panel survey (participant)	Attrition during the 18-month follow-up (participant)
Information (T1)	0.018 (0.017)	-0.012 (0.013)	-0.015 (0.021)	0.029 (0.032)
Training (T2)	0.013 (0.015)	-0.004 (0.014)	-0.027 (0.020)	0.026 (0.031)
Stipend (T3)	0.009 (0.016)	-0.013 (0.014)	-0.028 (0.019)	0.040 (0.034)
OJT (T4)	0.025 (0.019)	-0.001 (0.014)	-0.014 (0.018)	0.030 (0.032)
Observations	2,215	2,215	2,215	2,215
R-squared	0.147	0.185	0.133	0.163
Mean of the control group	0.02	0.02	0.03	0.02
P-value for joint significance	0.63	0.33	0.23	0.78
Info effect: T1 - C (beta)	0.02	-0.01	-0.02	0.03
Info effect: T1 - C (p-value)	0.31	0.36	0.47	0.36
Training effect: T2 - T1 (beta)	0.00	0.01	-0.01	0.00
Training effect: T2 - T1 (p-value)	0.67	0.21	0.17	0.77
Stipend effect: T3 - T2 (beta)	0.00	-0.01	0.00	0.01
Stipend effect: T3 - T2 (p-value)	0.68	0.17	0.88	0.32
OJT effect: T4 - T3 (beta)	0.02	0.01	0.01	-0.01
OJT effect: T4 - T3 (p-value)	0.21	0.09	0.13	0.39
Control for Phase	Yes	Yes	Yes	Yes
Control for observables	Yes	Yes	Yes	Yes

Notes: Figures in the parenthesis are standard errors clustered at the village level.\*\*\* denotes significance at 1%, \*\* at 5%, and \* at 10%. "C" stands for control group.

**Table 1C: Details about the Index formation**

Name of The Index	Variables Included in the Index
Work Physical Strees Index	I have experienced physical stress during the last seven days, My physical stress has worsened over the last six months
Family Stress Index	I have experienced some mental stress for reasons connected to my family, My family-related mentall stress due to work has worsened over the last six months.
Non-work Stress	I have experienced some mental stress for reasons not connected with my work or family. My mental stress for reasons not connected to work or family has worsened over the last six months.
Health Index	Number of ill members in the HH, dummy if HH head was ill, number of ill members under 5 in the HH, number of ill members aged greater than 65 in the HH
HH Vulnerability Index	HH face food-shortage all year (dummy), HH take less than three meals a day during monga (dummy), HH takes only one meal a day during monga.
HH Asset Index	Total productive assets owned by the HH in a year, HH's asset consumption in last year, total livestock asset holding by the HH, Dwelling size, Dwelling owned by the HH (dummy), own cultivated land (decimal), HH total land holding(decimal)
HH Livestock Index	No. of Cows/Ox/Buffelo, No. of Goats/Sheeps. No. of Chicken/Ducks/Hens.
HH Housing Condition	Better house(dummy if HH dweling is made with corrugated iron or brick), Better flooring (dummy if HH floor condition is brick or cemented), One+ room (dummy if HH has more than one room), Separate Kithchen (dummy if HH has a seperate kithchen), Separate toilet (dummy if HH has a seperate toilet of their own), Better latrine (dummy if HH use sanitary latrine), Electricity (dummy if connected with national grid or solar)
HH Savings Index	Dummy for any positive amount savings, HH total savings at home (lock box, piggy bank), HH total savings with NGO/MFI, HH's total savings (Jewelery and cash) , HH's total outstanding lending in the last 1 year, Sum of current savings in the bank, Financial Inclusion (dummy if the HH has any access to formal financial means, including bank, post office, MFI)
HH Borrowing Index	(sum) borrowing amount from MFI, (sum) borrowing amount from commercial banks, (sum) borrowing amount from local grocery shops, (sum) borrowing amount from relatives, (sum) borrowing amount from neighbours/friends.