



Strengthening Women's Ability for Productive New Opportunities (SWAPNO)

Report on Impact and Evaluation of 1st Project Cycle

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Final Report



IMPACT EVALUATION OF THE 1ST CYCLE OF 'SWAPNO'

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Executive Summary

Strengthening Women's Ability for Productive New Opportunities, also known as **SWAPNO**, is a typical public works based 'graduation model' targeting distressed and vulnerable rural women. Since it is a so called 'graduation model', it not only aims at lifting the poor out of poverty during the project period, but also helps them sustain with the higher income level in the absence of the project. While the first part is relatively easy due to high wage income, the second part of sustainability of project outcome after the project requires additional interventions. SWAPNO, following global best practices, complements public works with mandatory savings, participation in ROSCA (Rotating Savings and Credit Associations), training on life skills and livelihoods and linkages with local markets and potential employers. The idea is that the set of skills learnt from training will help beneficiaries invest their savings for productive purposes which will yield a stream of income when the project is no longer supporting them. We found that guaranteed wage employment has increased their household income substantially, lifting a large share of beneficiaries from abject poverty during the project life. This has also led to an improvement of their social status, self-esteem and confidence, as well as their aspiration for a better life in future. These non-income outcomes are also believed to help beneficiaries sustain their high income and living standard beyond the project.

The beneficiary women were employed from 16 August 2015 to 15 February 2017 for a tenure of 18 months and each beneficiary received a total of BDT 66,450 as cash wage payments, along with the amount of BDT 22,150 as a 'graduation bonus', which was built up from the mandatory savings scheme of the project. Along with employment, the SWAPNO women also received seven basic life skills and livelihoods trainings. The purpose of this study is to assess the impact of these interventions on the well-being of the beneficiaries. To this end, we conduct an end-line survey on the same treatment and control groups that were in baseline sample. The baseline survey was conducted in August 2015 on a total of 1200 households (HHs) which included 800 intervention HHs and 400 control HHs in Kurigram and Satkhira districts. The baseline HH survey utilized the Randomized Control Trial (RCT) design, which allows us to evaluate the impact of the interventions with proper counterfactual.

We found substantial increase in income and assets of the beneficiaries. The project contributes about 40 thousand Taka increase in income, which has led to a drastic reduction of poverty, both moderate and extreme. They are now more food secured as the share of households skipping one or two meals has dropped. The increase in income has resulted in increase in both food and non-food expenditure, particularly education expenditure. In the project period, the source of income did not rely on project income only; the beneficiaries had income from other sources such as income generating activities (IGAs) and non-SWAPNO labour income. At the time of interview, most of the beneficiaries have invested their graduation bonus and they invested in livestock, poultry and other productive assets. Livestock is now the main asset of the beneficiaries. Not only the amount, but the composition of asset has changed - livestock constitutes about 43% of total assets, which was only 13% before SWAPNO. The graduation bonus has also helped the beneficiaries access agricultural land market as they are leasing in land. This shift of occupation from wage labour to a mix of farmer and wage labour has tremendous impact on their self-esteem and social status.

Beneficiaries now perceive to have better health despite little change in scientific measures of health condition such as BMI. However, we did not find any significant impact on children's education or health. Their coping strategies in the face of disaster has also changed; now they rely more on their savings than borrowing from others such as *Mobajan* (local moneylender) at high interest rate.

The participation rate was high in all courses of the training programmes and the beneficiaries found the courses useful; they learnt new things and applied them in their lives. We found that the beneficiaries have better knowledge on IGAs and accounting than the control group. They also learnt a few things on laws – they are now more aware of the punishments in laws for polygamy, child marriage, dowry and divorce than the control group.

Public works based 'graduation model' is argued to be different from direct asset transfer based model on the ground that the former enhances women empowerment and boosts self-confidence and aspiration, which are the key ingredients of the sustainability of the project outcomes. Instead of having assets transferred as a gift, beneficiaries build assets from their hard-earned income from guaranteed employment in the public work based model. The fact that destitute women earn, save and build assets on their own gives them self-confidence and self-esteem. SWAPNO is expected to help develop group solidarity, self-confidence, aspiration and access to service institutions. We found that the beneficiary women have higher control over personal and household assets than their non-participant counterparts and are more able to make decisions about IGAs on their own, thanks to SWAPNO. The beneficiaries are more mobile outside their community than before, which is an important indicator of women empowerment. They are found to be more optimistic about their future and have higher self-esteem, self-confidence and the aspiration to live a better life in the years to come.

Since the survey was conducted soon after the project cycle ended, this study can only capture the short term impact, that is, it assesses only what has happened during the project period. However, there are indications that the short term impact of the project is likely to sustain, though the extent of sustainability can be debated. As we discussed, the first major indication is the amount and type of productive investment they made out of their wage income and mandatory saving. Second, the beneficiaries have learnt some basics of running a business and basic arithmetic. It has boosted their confidence in themselves, which is manifested in their discourse, body language and attitude. Third, their control over their assets as well as their mobility has increased, along with self-confidence, self-efficacy and aspiration. All these indicators suggest that the beneficiaries now aspire to live a better life and they will continue to do so in the absence of the project.

The report also made some recommendations on the project design for the next cycle of the project. The key recommendations are:

- Since the project has dual objectives of improving well-being of the beneficiaries and maintenance of public works, the latter can be compromised with the excitement that the former is achieved. Therefore, monitoring of the public works is central to the success of this project and the next phase should invest more in monitoring exercise.
- The length of the workfare can be revisited – it can be extended from 18 months to 24 months as the beneficiaries reported that the first year was all about repaying debt and making some essential spending. They can start thinking of productive investment from the second year and 18 months is too short a time for them.
- The graduation bonus can be paid in the middle of the project so that the project staff can have enough time to monitor the assets.
- The beneficiaries should know in advance what would happen after the project if they invest their graduation bonus in certain ways. That is, the 'business model' has to be specified and communicated to the beneficiaries.
- Union Worker is a significant innovation of the project. Their number per union and their remuneration can be increased.
- Livelihoods training should include hands-on training, ensuring an optimal mix of class room teaching and practical sessions.
- Union Digital Centre (UDCs) are under-utilized and can be involved in several stages of the project implementation, from beneficiary selection to project monitoring.

Chapter 1

Introduction

Strengthening Women's Ability for Productive New Opportunities, also known as **SWAPNO**, is a project undertaken by the Local Government Division, Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C), in partnership with United Nations Development Programme (UNDP), Bangladesh. The project is basically a public works based social safety net programme for destitute and vulnerable women of the country, which also has a built-in 'poverty graduation' mechanism embedded in it.

The SWAPNO project is not just a simple safety net programme with short term transfers that aims to keep the poor from slipping further into poverty. Rather, it focuses on the long term objective of lifting the poor out of poverty and into resilient and dependable livelihoods so that they may become self-sufficient and no longer dependent on government aid. At the same time, the project also focuses on the empowerment and human capital base development of the beneficiary women through general awareness creation and specific training courses. These interventions are intended to help the women choose and develop sustainable means of livelihoods while leading an improved and dignified life.

In the pilot phase of the SWAPNO project, the beneficiary women were employed from 16 August 2015 to 15 February 2017 for a tenure of 18 months. During this period, the women were employed by the Union Parishad (UP) in public works involving public asset maintenance. The work-fare typically includes maintenance of local roads and other public assets. The selection of the public works was done by the local elected leaders in consultation of the community. As a result, the villagers and the users of the public assets associate the quality of public works with the commitment and initiatives of the local elected leaders. Hence, quality maintenance of the public assets is very much aligned with the leaders' political goal and career. This is an important aspect of the SWAPNO project.

Each beneficiary received a total of BDT 66,450 as cash wage payments along with the amount of BDT 22,150 as a 'graduation bonus', which was built up from the mandatory savings scheme of the project. The idea here is that the women will be able to use this amount of savings for the purpose of asset accumulation or investments in income generating activities (IGAs). The wage payments were made fortnightly and the team leader of each group is responsible to collect the wage payment for all group members.

SWAPNO also encourages personal savings habits by promoting group savings mechanisms like Rotating Savings and Credit Associations (ROSCA). The group members meet once in every two weeks when the wage payment is made. They all chip in 200 Taka per person and conduct a lottery of pooled savings among themselves. The winner gets the whole pot. Once a beneficiary gets the pot, she becomes ineligible for further wins in the current cycle and has to wait for the next cycle. If it is a 12-member group, it takes about 6 months to complete a cycle.

Along with employment, the SWAPNO women also received seven basic life skills and livelihoods trainings. The livelihood trainings include training on preparation of business and simple accounting, while life skills trainings were on health and nutrition, gender and development, women rights and entitlement, leadership development and coping with climate change. Trainings on livelihoods are customized according to the local need. For example, in Satkhira there was a training module on fish culture and crab fattening. Other specialized courses include training on cow fattening, cow, goat, sheep and poultry rearing, vegetable cultivation, etc.

According to the project document, the project also aims at creating different types of linkages between the beneficiary women and various service delivery institutions and organizations including service delivery departments at the Upazila (sub-district) and UP levels, as well as local small and medium enterprises (SMEs) and other businesses. The purpose is to enhance the post-SWAPNO business and employment opportunities of the women. However, this intervention did not get much momentum during the piloting phase of the project.

In short, there are three major interventions of the project that we investigated – i) fixed wage contract for 18 months, ii) compulsory savings along with ROSCA, and iii) several life skills and livelihoods trainings. Therefore, the purpose of this study is to assess the impact of these interventions on the well-being of the beneficiaries. To this end, we conducted an end-line survey on the same treatment and control groups that were in the baseline sample. The baseline survey was conducted in August 2015 on a total of 1200 households (HHs), which included 800 intervention HHs and 400 control HHs in Kurigram and Satkhira districts. The baseline HH survey utilized the Randomized Control Trial (RCT) design, which allows us to evaluate the impact of the interventions with proper counterfactual.

Scope of Work

UNDP Bangladesh and LGD has contracted BIDS for the purpose of conducting the end line survey and study of the pilot phase of the SWAPNO project. The main objective of this assignment is to conduct a repeat or end line survey on the 1200 HHs surveyed in the baseline study, including 800 beneficiary HHs and 400 control HHs in order to evaluate the impact of the SWAPNO project. Towards this end, several outputs have been outlined by UNDP & LDG as requirements from this study. They are as follows:

1. A literature review of the poverty graduation models that have already been implemented in the country and how SWAPNO compares and contrasts with them, including the lessons that can be learnt from the project. It will also shed light on how SWAPNO is in line with best and most effective practices as validated by global evidence.
2. Participate in meetings with relevant staff of SWAPNO, LGD and UNDP and review relevant project documents to understand the project design, particularly the interventions (employment and training), delivery mechanism and incentive structure.
3. Submission of a detailed work plan to SWAPNO which will include the timeframe of the study along with the mention of the responsible parties.
4. Visit and consultation of the core research team with project stakeholders including women beneficiaries, community members, Union Parishads' representatives, Deputy Director Local Government, project staff members in the field operation area to evaluate project progress and identify lessons learnt.
5. Finalize the survey methodology including data collection methods and analysis framework. Finalize data collection tools (questionnaire, checklist) and guidelines for the end-line survey as well as the methods of analysis.
6. Organize training session for the enumerators and supervisors, followed by field practice.
7. Collect data from the respondents as per sampling list, using prescribed tools and techniques.
8. Prepare and finalize data analysis and tabulation plan and generate required output tables.
9. Provide soft copy of cleaned data set with summary output tables.
10. Submit draft report of the study to SWAPNO prior to submission of the final report (which will incorporate the feedback from SWAPNO on the draft report).

Deliverables

The list of deliverables required from this study is as follows:

1. A literature review of different poverty graduation models, how SWAPNO relates to them and what are the lessons that can be learnt from SWAPNO
2. Report of the SWAPNO project impact evaluation study (draft and final reports)
3. Data set of the end of HH survey

Chapter 2

Literature Review: How SWAPNO Fares with Other Graduation Models

Graduation models involving Asset Transfers or Public Works

Currently, almost all developing countries run a variety of social safety net programmes to provide support to the poor in order to prevent them from slipping or falling into further poverty below a certain level. These usually include transfers of cash or food to the poor and these programmes are found to have significant positive impact on the level of income and their ability to cope with shocks (Hagen-Zanker et al., 2011). But the scope of such interventions is very limited and does not take into account the long term impact, ensuring a permanent solution to the low level equilibrium of poverty trap. The evidence that temporary support to the poor is not enough to lift them out of poverty in the long run has spawned a host of models, popularly known as ‘graduation model’, which includes a package of interventions aiming to upgrade the ability of the beneficiaries so that can maintain high income in the absence of the project. There are differences in views among the practitioners and policy makers on the types and their optimal mix of ingredients in the package, its delivery mechanism and also length of interventions, giving rise to a myriad of ‘graduation models’.

While literature on graduation models is very extensive, we will concentrate on two sets of models only – direct Asset Transfer Programme (ATP) and Public Works (PW) based model. The purpose of this literature review is not to provide the readers with a full gamut of issues pertaining to the debate of graduation models, rather to offer a brief account of these two models so that the reader can place SWAPNO in proper context. In doing so, we will discuss some aspects of project design and implementation mechanism of SWAPNO in detail, in comparison with other models.

This model of poverty graduation was first conceived in 1985 when BRAC partnered with the Government of Bangladesh and the World Food Programme (WFP) using an existing safety net programme of the government titled ‘Vulnerable Group Feeding’ (VGF) to incorporate a graduation mechanism in it. The resulting pilot programme of the initiative became the ‘Income Generation for Vulnerable Group Development’ (IGVGD) programme and further improvements in the programme design lead to the creation of BRAC’s hallmark initiative ‘Challenging the Frontiers of Poverty Reduction/Targeting the Ultra Poor’ (CFPR/TUP) programme in 2002. It was initially implemented in three relatively poor districts in Northwest Bangladesh, Rangpur, Kurigram and Nilphamari, and was later scaled up to 15 districts. In addition to assets, the package includes assistance for using assets effectively as microenterprise, training on livelihoods and general education, microfinance, health services and family planning, installing sanitary latrines and helping build social capital through village support networks. This set of complementary inputs is more comprehensive than what a typical public works based model offers. Many rigorous studies have been conducted to assess the impact of TUP and all of them have found significant impact of programme participation on net income, food security, ownership of livestock and household durables such as tube wells and blankets/quilts of the ultra-poor households (See Emran, et al. (2009); Bandiera, et al (2017)).

Following the spirit and design of TUP, experiments with the types and mix of inputs which complement the asset transfer continues in Bangladesh. In this vein, the Chars Livelihoods Programme (CLP) was introduced in 2004 and was implemented in 2 phases till 2016. In this case, the beneficiaries were the extremely poor households living on low-lying temporary sand islands (called chars) on the Jamuna River in Northern Bangladesh. In addition to an asset, which is typically a livestock, beneficiaries received a monthly stipend for the first six months (Tk. 400-600 per month), followed by a lower stipend (Tk. 300-350 per month) for the subsequent 12 months. Supplementary inputs for graduation included training on social development, village savings and loans associations, community health care, and enterprise development. The beneficiaries of CLP

are also found to have improved their living condition through higher income and asset base (OECD, 2011), though the study is not a robust one.

Another notable asset transfer programme is EEP-Shiree which was implemented from 2008 to 2016 in 3 Districts - Sunamgonj, Habiganj and Kishoregonj. Unlike other ATPs, it introduced the transfer of a wide range of assets such as livestock, poultry, rickshaw, van, other productive inputs, and Khas land distribution. Routine project evaluation reveals that 95% of beneficiaries have graduated from extreme poverty due to EEP-Shiree (DFID, 2015).

In a nutshell, initial consumption support followed by an asset transfer with a package of complementary inputs and training has become the workhorse model of all Asset Transfer Programmes (ATP) in Bangladesh. Though such programmes involve the government, they are primarily driven by NGOs and donors and this marks a significant departure from public works based model such as SWAPNO. In the context of a developing country like Bangladesh, if any development effort has to be scaled up in coverage, the involvement of the government at some level of project implementation is essential. It is important to provide the ‘ownership’ of the project to the government so that it can integrate this effort into its overall development initiative and achieve the level of scale and efficiency that is required for such programmes. The government does not want to get involved directly in asset transfer because implementation is complex, cumbersome and costly for the government. On the other hand, public works based model involves different tiers of government in different phases of the project such as project and beneficiary selection, monitoring of the public works, payment mechanism, etc. In fact, a beneficiary works as an employee of the Union Parishad, giving government the right to monitor the works as well as the ownership of the work. Therefore, it can be argued that scaling up of public work based (PW) safety net programmes is more feasible than the ATPs because of greater involvement of the government. However, it is also worth noting that BRAC’s TUP has reached about 1.6 million households and this was possible due to its country-wide branch network and its experiences in delivering complementary inputs, unlike other NGOs.

Direct asset transfer programme also differs from public works based approach to the extent social protection can contribute to economic growth. Dual objectives of poverty reduction and public asset building can be argued to contribute to economic growth (Alderman and Yemtsov, 2014) more than the objective of poverty reduction through private asset building. If in both cases, households end up accumulating similar assets such as livestock, a natural question one can ask is: why not transfer the asset directly to the beneficiary instead? If operational costs are the same, the PW involves building both public and private asset while ATP builds only private assets. The combined effect of both private and public assets of PW approach can contribute more to economic growth than that of ATP.

Setting wage under the market rate in public works approach helps target the poor efficiently. The targeting instrument relying on the differential opportunity costs of the poor and non-poor (Besley and Coate, 1992) also makes this approach different from ATPs.

Now we will briefly discuss one PW programme in Bangladesh and some notable ones from other countries. Important global examples include the Productive Safety Net Programme (PSNP) in Ethiopia, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in India, the Vision 2020 Umurenge Programme (VUP) in Rwanda and the Expanded Public Works Programme (EPWP) in South Africa, and Programa de Jefes y Jefas de Hogar in Argentina. In local context, we will draw some lessons from REOPA, the predecessor of SWAPNO.

In Bangladesh, REOPA (Rural Employment Opportunities for Public Assets) was the pioneer in public works based graduation model which started in 2008 and was implemented in 41 Upazila of 6 districts. The SWAPNO project is built on REOPA with some modification - the length of the work-fare of REOPA was 24 months as against 18 months in SWAPNO; there is more emphasis on training for future employability in SWAPNO;

Union Worker is also an innovation in SWAPNO. All other supplementary interventions are similar including their implementing agencies. The REOPA project evaluation report suggests significant improvements in socioeconomic conditions, food security, nutrition and women empowerment (European Union, 2013).

Public works programmes have a long history of implementation. A public works relief programme was used to construct a section of a road between Islamabad and Peshawar in the 12th century in what is now Pakistan. In the 18th century, the Poor Employment Act in England was used to hire surplus labour for work in public assets, while at the turn of the 20th century, public works programmes were launched in many parts of Africa and South Asia. But it was the Indian experience of the 1970s that geared much of the current momentum for implementing and scaling up public works programmes that we now observe today. The Indian state of Maharashtra was struck by a huge drought that forced 70% of its rural population into poverty. In response to this disaster, an innovative public works programme was introduced which offered a *guarantee of employment* for the very first time in India, the Maharashtra Employment Guarantee Scheme (MEGS). The MEGS programme was very much successful in not only reducing the level of rural poverty, but it also led to the development of rural infrastructure and improved resilience against shocks.

Inspired by the success of MEGS, India introduced the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in February 2006, which was later scaled up to become the largest public works programme in the world, providing unskilled manual work to 57.8 million adults from 38.9 million rural households during the fiscal year of 2014-15. Strong role of local government (gram panchayat), efficient monitoring mechanism and use of ICT makes it distinguishable from other PW models practiced in Bangladesh and elsewhere. For eligibility, one has to first apply and register for job card to the gram panchayat and then he or she can apply for work. Any adult (above 18 years) can apply for work and if work is not provided within 15 days of a worker's application, state governments are liable to provide an unemployment cash benefit. The programme also has a target for the inclusion of women (one-third) in the programme design (ILO, 2016).

What makes MGNREGS innovative is its use of ICT in implementing and monitoring the programme. NREGASoft is a specialized management information system used for management and monitoring of MGNREGS. Its MIS system is very extensive covering job cards, work estimates, pay orders, and pay slips; its web portal contains real time data in public domain.

Ethiopia's Productive Safety Net Programme (PSNP), launched in 2005 with the aim to transform the food aid-based system into a productive one, differs SWAPNO in three broad ways. First, it is a mix of cash and food transfers to households that are unable to fulfil the work requirement (20 percent) and guaranteed works for households with able-bodied members (80 percent). Second, in PSNP the length varies with clients - clients will remain in the PSNP project for multiple years until they reach the graduation threshold (Ministry of Agriculture, Ethiopia, 2014). Third, the wage rate is determined based on food security considerations and on the number of people in the household unlike REOPA or SWAPNO which offers at or below the market rate to promote self-selection into the programme.

The current daily wage rate in the programme is about US\$0.80. The estimated annual transfers per beneficiary household are equivalent to about 40 percent of their annual food needs. The programme reaches more than 7 million people, or about 10 percent of the national population of Ethiopia, and implements about 34,000 small-scale labour-intensive public works projects per year, with labour costs accounting for about 80 percent of the total cost of each sub-project. Rigorous evaluations of this programme have confirmed that it has made significant changes in the lives of the poor in Ethiopia.

PSNP-type of programme has become very popular in other parts of Africa. Similar to PSNP, Rwanda's Vision 2020 *Umurenge* Programme (VUP) combines public works (50 percent of resources), cash transfers (20 percent), and microfinance loans (30 percent) to targeted poor beneficiary households in the poorest sub-districts. The programme is managed by the Ministry of Local Government and the different public works encompass land

productivity and irrigation, mainly terracing, ditches, small dams and forestry, as well as the construction of roads, school classrooms and health centres. However, wage-rate setting follows the objective of efficient targeting, like SWAPNO. Wages are set at the district level and vary by project type but with a guideline that they should be less than or equal to the market rate for similar work. As of 2009, wages averaged about US\$ 1.50 per day. As of FY 2010/2011, the government spent Rwf 8.9 billion on VUP public works, equal to about 0.7 percent of the national budget, and employed 522,856 people, half of whom were women. This is equivalent to about 5 percent of the national population. VUP public works were found to have reduced extreme poverty in the areas covered by the programme (Government of Rwanda, 2007).

Over time, public works have been used both for the purpose of poverty reduction as well as for temporary employment creation in countries facing adverse shocks which lead to rising unemployment. While SWAPNO and Rwanda's Vision 2020 Umurenge Programme are public works programmes which focus on poverty reduction, Argentina's Jefes de Hogar (Head of Household) and Latvia's Workplaces with Stipend Emergency Public Works Programme are examples of programmes to address temporary unemployment. Public works can also be undertaken with the goal of infrastructure development, as in Sri Lanka's Cash for Work Component of the Emergency Northern Recovery Project.

In recent times, public works programmes have been modified to include several important design and operational innovations that have led to improved programmes with higher efficiency and more holistic approaches. One such significant innovation, and one which is definitely important for us, is the addition of a scheme to create a pathway out of poverty for the poor (*graduation*). Such modified models are termed as 'public works plus'. SWAPNO therefore is an example of a public works plus model. The use of information technology for a host of services like beneficiary selection, payment processing, monitoring programme and tracking activities to improve efficiency, accountability and governance is also an important innovation. Other innovations include the use of community networks in social audits and an increased emphasis on engaging women by making the programmes female-friendly.

Public works programmes across the world are implemented by a variety of institutions. For example, in South Asia, they are mostly run by the government as part of a larger poverty reduction strategy, while in Africa other implementing actors like bilateral donors, NGOs, social funds and private contractors are more prominent. In Latin America, such programmes are primarily run by governments alone or in collaboration with donors (Subbharo et. al., 2012). The SWAPNO model makes use of a combination of implementing agencies. The project is primarily implemented by the Union Parishads (UP), which is the local government entity, with support from UNDP (development agency) and partner NGOs. The UPs determine the type of work to be undertaken by the public works scheme and also monitor the progress and quality of work. While UNDP designed the various features of the programme and helps in their implementation, the bulk of the delivery of programme interventions is carried out by the partner NGOs.

Targeting beneficiaries and wage setting

When public works focus on poverty reduction, the programme usually employs specific targeting methods like geographic targeting or households with below a certain threshold poverty line income in conjunction with or instead of other selection methods. But one of the most effective methods of beneficiary identification is that through the use of wages as a *self-selecting* mechanism. The main idea behind this method is that if the wages from the programme are set low enough, then it will only attract those people who are in most need of employment, i.e. those who have no other employment opportunities. Therefore, this method helps to address the *adverse selection* problem to some extent by encouraging those who are genuinely in need of assistance to receive the programme benefits while at the same discouraging participation of the non-poor.

SWAPNO employs a combination of *geographic targeting*, *self-selection using the wage rate* and finally *administrative and categorical targeting*.

Geographic targeting is most commonly used when the poor and vulnerable of the country are disproportionately located in specific regions. This is the case of Bangladesh where the poor and vulnerable are mostly located in the Southern coastal and Northern *monga* (seasonal food shortages) affected divisions of Dhaka, Barisal, Khulna, Rajshahi and Rangpur. The initial phase of the SWAPNO programme was conducted in two districts, the coastal Satkhira and the *monga* prone Kurigram district. SWAPNO employed updated geographic targeting procedures to identify the Upazilas and Unions with the most poor and vulnerable population, taking into account vulnerability brought on by climate change, geographic remoteness, incidence of poverty, riverbank erosion and natural disasters.

After selection of the regions where the programme would be implemented, the next step was the identification and selection of beneficiaries. The full procedure of beneficiary selection is outlined as follows. Extensive promotional campaigns through canvassing, distribution of leaflets and posters were undertaken by the SWAPNO Union Workers and other project officials to inform the locals about the upcoming programme for the poor. The campaigns also provided information on the type of work to be carried out by the beneficiaries, wage rate for the work and the eligibility criteria for applicants. The criteria for eligibility included the following: women who are poor and have limited economic opportunities, are widowed, divorced or deserted, are not currently involved in any income earning activities, do not have access to sufficient amount of land or other productive assets and are the primary income earners of their households.

Interested applicants were asked to come to the Union Parishad office on a given date and time along with their National ID cards. The UP prepared a viva board comprising the UP Chairman, Ward Members and members of the UP Standing Committee for the purpose of beneficiary selection. This was the first round of screening of the applicants where their eligibility, age and fitness for work was checked. Next, after approval from the viva board, the short-listed candidates were given a token with their name and were brought to the front of the UP office for conducting a beneficiary selection lottery. The UP Chairman himself was present during the lottery so that the process could be fairly conducted and any issues that may arise could be addressed quickly with the help of the local public representative. The lottery was conducted with the help of small children to illustrate the fairness of the process to the women. A total of 36 women were selected through lottery from each of the Union with 4 women from each Ward and those whose name did not come up in the lottery were put in a waiting list. The use of lottery for beneficiary selection has two major advantages. First, it made the process transparent and so those who were not selected would have weaker grounds for complaining. Second, it meant that the women could not pay bribes or coax the authorities in any other way to secure their participation in the programme.

After the first round of women were selected through lottery, the SWAPNO Union Workers visited the households of each of the 36 women from the Union to verify their eligibility. If any woman was found to be ineligible (e.g. if they had provided wrong or false information), then they would be dismissed and replaced by another woman from the waiting list picked through a second lottery. Prior to the conducting of the second lottery, the Union Workers also visited the households of the women in the waiting list to verify their eligibility beforehand.

The SWAPNO programme set the wage rate for the public works at Tk. 200 per day. In Kurigram, while the wage rate is subjected to seasonal fluctuations, a woman agricultural labour can earn on an average of around Tk. 300 per day in the peak season. By setting the wage rate of the programme slightly below the market wage rate, the SWAPNO programme employed the mechanism of self-selection using the wage rate so that the non-poor women would be discouraged from participation while the targeted poor women would have higher scope of participation. At the same time, the programme also used a set of eligibility criteria for participation in the programme and this method of selection falls under administrative and categorical targeting (which is the targeting of characteristics beyond poverty like gender based selection of participants).

Another popular method of targeting beneficiaries used by many poverty graduation programmes, both in the country and internationally, is the method of Participatory Wealth Ranking developed by BRAC for the implementation of the CFPR/TUP programme. In this method, groups of 40 to 50 villagers are asked to discuss and rank the wealth of every household in the village. In ranking the wealth of households, the participants are asked to consider several aspects like does the household have a steady source of income, ownership of productive assets, material use for housing and children school attendance among others. After identification of the poorest households, the programme staff visit each of the households and uses questionnaires to determine who qualifies. The information collected is then reviewed by senior managers to determine the final selection of beneficiaries.

Project monitoring

Setting up an appropriate monitoring mechanism is key to success of any public works project since it is prone to high moral hazard of the beneficiaries. Community oversight in Ethiopia is a glaring example of how community participation can ensure better public works. In fact, the role of communities is becoming increasingly important in several aspects of implementation of public works based safety programmes. A greater involvement of communities leads to increased decentralization of the programme design and the use of bottom-up approaches in implementation (Subbarao et al, 2013). Conning and Kevane (2000) finds that with better access to information, community members are better able to select, design, implement and monitor projects while Hoddinott (1996) found that community involvement also reduces administrative and coordination costs. There are several ways in which communities can help in the implementation of programmes. Communities can help in the identification and selection of beneficiaries, select projects for public works, monitor programme activities and track progress and may even help to fund projects.

While the beneficiary selection process of SWAPNO did not directly involve the community, the selection of local public assets for the public works were carried out in a participatory manner. First there were discussions in the Ward Sabha meetings on which local public assets to work on and the recommendations were presented to the Union Parishad for approval. A Union Parishad Standing Committee then finally decided on the list of public assets to work on through the SWAPNO project. Additionally, SWAPNO officials report that the Union Parishad Standing Committee in charge of the SWAPNO project was more active than the others and regularly sat for meetings every three months. The Standing Committee members would visit the different worksites every 14 days to supervise work progress and assign new work to the leader of the Women Crew Groups.

SWAPNO also employed a method of community monitoring and supervision which was borrowed from the experiences of REOPA. A banner with the schedule of work activities, progress of work and the time allocated for each type of work was placed near each of the worksites. The purpose of this was to inform the general public about the schedule of different work activities so that they can easily check if the women are working properly and in a timely manner. Therefore, this method presented a scope for community monitoring of the public works carried out through the project. SWAPNO officials claim that this was a rather effective method of monitoring the work done by the women.

There are instances of effective community based monitoring tools such as social audits of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) to monitor and evaluate the works following the annual village plan. MGNREGA is a public employment scheme that guarantees rural households 100 days of paid work every year for the poor. Under the Act every Gram Panchayat (village council) should have an annual MGNREGA plan that includes a list of all the projects that need to be carried out in the community. These projects include building new wells, repairing roads or irrigating farmland. The resulting assets – such as wells, roads or irrigation systems – are used and accessed by the whole community. Independent social audits of the Gram Panchayats should take place every 6 months, carried out by a third party.

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Chapter 3

Sampling and Methodology

The present study captures the socioeconomic impacts on the beneficiary women from participating in the SWAPNO project. A baseline survey was conducted prior to the administration of the programme interventions in order to evaluate the ex-ante socio-economic conditions of the poor women. The method of Randomized Control Trail (RCT) was employed in which some randomly selected individuals are chosen to receive the intended treatments, while a group of individuals (also randomly selected) are assigned as the control group (who do not receive any treatment). The idea is that if the treatments are randomly assigned, the post intervention changes in the treatment group (compared to the control group) can be attributable to the programme interventions alone.

In order to ensure transparency, lottery in each union was conducted in front of the Union Parishad Chairman, other elected members of the Union Parishad, local elites and the local people. The selection procedure of the beneficiaries is discussed in detail in Chapter 2. Thus, the purpose of the end line survey is to gather information on the ex-post socio-economic conditions of the women and evaluate the effectiveness of the programme by comparing it to the baseline data.

Distribution of sample

Therefore, the sample of 1200 HHs interviewed is the same sample that was included in the baseline study with some exceptions. In the baseline, a total of 14 Upazilas were chosen from the two districts of Kurigram and Satkhira, with 9 Upazilas from Kurigram and 5 Upazilas from Satkhira. From each of the districts, 20 Unions were selected where the SWAPNO project interventions were administered and data on households from both the treatment and control groups were collected. From each of the Unions, 20 treatment and 10 control households (for a total of 30 households) were surveyed for the end line with the only exception being Jaimonirhat Union, from which 11 control households were taken (to maintain consistency with the baseline survey).

The level of attrition is below 5% of the baseline sample – 20 in Kurigram and 35 in Satkhira. The attrition occurred because some of the respondent women were not available in the area during the survey period. Most of our questions are beneficiary specific and we ask a good number of questions about the perceptions of the respondents. Therefore, we did not allow others to answer on the behalf of the respondents. Some of the respondents had moved away to other places in search of job; some got married and are now living with their husband in another area. Some respondents migrated elsewhere with their entire family. The attrition is found to be more prevalent in the control group than in the treatment group. The treatment group had been under close monitoring of the project staff and therefore was easier to locate.

In case of attrition in the treatment group, the replacement is simple – finding another household in the neighbourhood enrolled in the SWAPNO project. However, finding a control household was troublesome – we had to painstakingly scrutinize the list of names who did not win the selection lottery. The final list of the sample by district and sub-districts is at the end of the chapter in the appendix (Table A3.1).

Survey instruments

A structured questionnaire was used for the household survey. The questionnaire used in the baseline survey was largely retained for the purpose of the end line survey, while some changes were made to it to better reflect the requirements of the end line study. In this regard, the end line questionnaire included a new section specific to the interventions of the SWAPNO project to identify the impact. Additionally, the questionnaire was modified in several places to ensure that the relevant questions are asked and the impact of the interventions fully captured. For example, non-income outcomes such as women empowerment, self-confidence and aspiration were made salient in the questionnaire. In order to understand the delivery mechanism of the project

better, we also collected administrative data of the project on the qualification of the Union Workers and the instructors of the training programme.

We also conducted two Focus Group Discussions (FGDs) one in each district and also Key Informant Interviews (KIIs) with the relevant stakeholders such as the beneficiary women, UP officials, relevant staff of the SWAPNO project Dhaka office, UNDP Bangladesh head office and Local Government Division, MoLGRD&C. Information obtained through FGDs and KIIs were used for better qualitative understanding of quantitative data collected in the analysis and recommendations made.

Method adopted for impact evaluation

We use state-of-the-art techniques to present our results. Note that we have four groups to analyse – treatment and control in the baseline and the same two groups in the end-line. We use difference-in-difference method for the major variables so that we can attribute the changes in the variables from the baseline to the end-line to the SWAPNO project. That is, for each major variable, we run the following regression

$$Outcome_{i,t} = \beta_0 + \beta_1 After + \beta_2 Swapno + \beta_3 (Swapno \times After) + \varepsilon_{i,t}$$

Where the dependent variable $Outcome_{i,t}$ is income, asset, health, education, etc. of household i at time t which could be either baseline or end-line. ‘After’ is a dummy variable which takes on 1 if the data comes from end-line and zero otherwise. ‘Swapno’ is also a dummy variable which assumes 1 if the household is a participant of SWAPNO and zero otherwise. The interaction term $Swapno \times After$ captures the treatment effect or the difference-in-difference estimates. Therefore, β_3 is our parameter of interest and it is reported in the right most column of all tables with their level of significances. Single, double and triple asterisks signify the level of significance at 10, 5 and 1 percent respectively. However, it is also important to note that there are some questions for which the baseline data are not available. In such cases, we did not run difference-in-differences.

Appendix

Table A3.1: Distribution of sample by district, sub-districts and union

District	Upazila	Union	Treatment	Control	Total
Kurigram	Bhurungmari	Baladia	20	10	30
	Bhurungmari	Jaimonirhat	20	11	31
	Bhurungmari	Shilkhari	20	10	30
	Chilmari	Astomirchar	20	10	30
	Chilmari	Raniganj	20	10	30
	Fulbari	Borovita	20	10	30
	Fulbari	Naodanga	20	10	30
	Kurigram Sadar	Belgacha	20	10	30
	Kurigram Sadar	Pachgachi	20	10	30
	Nageswari	Ballaverkhas	20	10	30
	Nageswari	Bamandanga	20	10	30
	Nageswari	Narayanpur	20	10	30
	Nageswari	Nun Khawa	20	10	30
	Rajarhat	Chinai	20	10	30
	Rajarhat	Ghorialdanga	20	10	30
	Rajibpur	Mohonganj	20	10	30
	Rowmari	Jadurchar	20	10	30

District	Upazila	Union	Treatment	Control	Total
	Ulipur	Bazra	20	10	30
	Ulipur	Begumganj	20	10	30
	Ulipur	Hatia	20	10	30
Satkhira	Assasuni	Anulia	20	10	30
	Assasuni	Assasuni Sadar	20	10	30
	Assasuni	Protapnagar	20	10	30
	Assasuni	Sovenali	20	10	30
	Debhata	Debhata Sadar	20	10	30
	Debhata	Nowpara	20	10	30
	Kaliganj	Barasimla	20	10	30
	Kaliganj	Krishnanagor	20	10	30
	Kaliganj	Kusulia	20	10	30
	Kaliganj	Nalta	20	10	30
	Kaliganj	Tarile	20	10	30
	Shyamnagar	Gaburia	20	10	30
	Shyamnagar	Munshiganj	20	10	30
	Shyamnagar	Ramzannagar	20	10	30
	Shyamnagar	Paddapukur	20	10	30
	Tala	Khesra	20	10	30
	Tala	Kumuria	20	10	30
	Tala	Nagarghata	20	10	30
	Tala	Tala Sadar	20	10	30
	Tala	Tetulia	20	10	30

Chapter 4

Demographic and Socioeconomic Profile

The purpose of providing an account on demographic and socio-economic conditions of the beneficiary households as well as the households in the control group is two-fold: i) to learn who these people are behind the numbers, and ii) to establish that the demographic and socioeconomic conditions of the treatment and control groups were more or less similar before the SWAPNO project was rolled out.

4.1 Household size and age distribution

Average size of household remains same in baseline and end-line for both control and intervention groups (Table 4.1) which is about 3 persons per household. Even though percentages of female headed households were more or less same for both treatment and control groups at baseline, the proportion declines for the control group in the end-line survey. However, the percentage remains same for the treatment group at end-line, which indicates no significant changes in demography between the two surveys. About 94% of the households are headed by females in the treatment group. Average age of women is about 35 years in both control and treatment groups. It implies that these households are headed by relatively younger women who are capable of doing physical labour.

Table 4.1: Average HH size, Female Headed HH and Average Age of Women

Variables	Baseline			End-line		
	Control	Treatment	Diff	Control	Treatment	Diff
Average HH size	3.15	3.01	-0.14	3.03	2.93	-0.10
% of Female-headed HH	92.30	93.60	1.30	86.8	93.5	6.72
Average age of women				34.99	35.23	0.24

Age distribution of household members does not differ across treatment and control groups in the end-line survey (Table 4.2). Note that we don't have this information for the baseline. More than 66% of household members are of working age category (15-59 years) for both groups. Young people (0-14 years) comprises around 25% and old people (above 59 years) are of around 7% of total population for both treatment and control group.

Table 4.2: Age distribution and Dependency Ratio

Variables	End-line	
	Control	Treatment
HH member aged 0-14 years (%)	24.85	26.13
HH member aged 15-59 years (%)	67.98	66.41
HH member aged 59+ years (%)	7.17	7.41
Dependency ratio		
Overall dependency ratio	0.67	0.75
Young aged dependency ratio	0.52	0.59
Old aged dependency ratio	0.14	0.16

Overall dependency ratio for the control group is around 67%, whereas this ratio is around 75% for the treatment group in the end-line survey (Table 4.2), implying that the young age dependency ratio is more profound than the old age dependency ratio. Female headed households with household size of 3 and higher young age dependency ratio implies that a typical household of both treatment and control groups comprise an adult female and two children.

4.2 Marital Status of Female Household Head

About 45% of female household heads in treatment and 43% in control groups are widows and about 24-26% of female household heads are abandoned by husband in both groups at end-line (Table 4.3). The proportions of divorced female household head are 17% and 23% for control and intervention group respectively. The proportion of married female household heads in both groups is very low (14% in control and 8% in treatment). The distribution of marital status shows the targeting efficiency of the programme.

Table 4.3: Marital status of female head

Marital Status	End-line (%)	
	Control	Treatment
Divorced	16.95	23.26
Abandonment	26.15	23.93
Married	13.79	8.02
Unmarried	0.58	0.13
Widow	42.53	44.65

4.3 Education of Household Heads (Female)

In terms of literacy, about 80% of female household head can sign, while this proportion is 72% for the control group (Table 4.4). The treatment group found to be more literate than the control – ability to read and write letter, and ability to sign is higher for the treatment group.

Table 4.4: Education of Household Head (Female) - End-line

	Control	Treatment	Difference
Literacy of Female Household Head (%)			
Can read and write letter	11.49	15.64	4.15
Can only read letter	1.15	0.93	-0.22
Can only sign	72.41	79.55	7.14
Cannot sign	14.94	3.88	-11.06
Education of Female Household Head (%)			
No Schooling	0.57	0.40	-0.17
Incomplete Primary	76.72	75.00	-1.72
Class 5 Passed	12.93	12.70	-0.23
Class 8 Passed	7.47	8.96	1.49
SSC/Equivalent Passed	1.72	2.27	0.55
HSC/Equivalent Passed	0.29	0.67	0.38
HSC above	0.29	0	-0.29

In terms of educational attainment, the difference between treatment and control group in post-treatment survey is not substantial. There is hardly any difference in completion of different grades. The fact that the female heads in both control and treatment are similar in schooling but the females in treatment have higher ability to sign, read and write demonstrates SWAPNO's contribution in improving literacy.

4.4 Occupation of female head

Self-employment of female household head in both agriculture (around 25%) and non-agriculture (around 26.5%) has been found to be significantly higher compared to control households (Table 4.5). On the contrary, wage labour is much more prevalent among female household heads in both agriculture (39%) and non-

agriculture (around 48%) of control households. The treatment group women are found to be more self-employed and less wage labour based than the control group. As we will see later, greater access to agricultural land market and higher involvement in IGAs have contributed to this significant change in occupational structure of the rural women.

Table 4.5: Percentage of households with primary occupation of female household heads- End-line

	Control	Treatment	Difference
Agricultural Wage Labour	39.08	23.93	-15.15
Self Employed in Agriculture	4.89	24.87	19.98
Non- Agricultural Wage Labour	47.99	19.92	-28.07
Self Employed in Non-Agriculture	2.59	26.47	23.88
Salaried Employment	1.72	1.34	-0.38
Begging	0.29	0	-0.29
Households Work	1.15	1.20	0.05
Unemployed	0.86	0.67	-0.19
Others	1.44	1.60	0.16

Chapter 5

Income, Assets and Expenditure

SWAPNO provided guaranteed job for 18 months to the distressed women of rural households. Each beneficiary received a total of BDT 66,450 as cash wage payments, which was about Taka 3700 per month. The remaining BDT 22,150 was mandatory saving which was paid to the beneficiaries as a ‘graduation bonus’ when the employment ended. The wage income and the income from the investment of the ‘graduation bonus’ constitute the major source of income of the beneficiaries. The beneficiary households were also involved in ROSCA, the rotating saving scheme, and each beneficiary won the lottery of pooled savings more than once during the project life. To the extent a beneficiary was able to invest the ‘graduation bonus’ as well as the sum from ROSCA in IGAs determines the success in improving their living condition in the absence of SWAPNO.

It is tricky to assess impact of an intervention which is yet to fully benefit the beneficiaries. The forced saving or the graduation bonus of SWAPNO is an interesting example of such intervention. While assessing the income and poverty status of the beneficiaries, it is therefore essential to distinguish between their gross income and the ‘disposable’ income. This distinction is important because the beneficiaries did not receive about 25% of their income until the end of employment. Therefore, during the project life, the beneficiaries had to sacrifice their current consumption for a higher future stream of income. Hence, in accounting sense, their gross income from SWAPNO was Taka 88,600 and since they were able to spend only 75% of it, the net amount of taka 66,450 can be referred as ‘disposable income’. Therefore, the delicate question is: while assessing the incidence of poverty, which income to consider – ‘gross’ or ‘disposable’? If we use ‘gross’ income it shows what would have happened if all income was spent. That is, it will yield an ‘upper limit’ of the number of households moving out of poverty line in the project period. However, if we use the ‘disposable’ income net of graduation bonus, it will give us the ‘actual’ number of households escaping poverty during the project period. Poverty analysis during the project period does not mean much when the full benefits of the interventions are yet to materialize.

What would happen after SWAPNO is beyond the scope of our study. Since the survey was conducted three months after the end of employment, we can only assess the short term impact of SWAPNO. That is, we ask the simple question: what has happened to the beneficiaries during the project period compared to the similar control group and baseline situations? However, we also assess their investment and make some educated guesses about their future stream of income in the absence of SWAPNO.

5.1 Household income and poverty

First, we will discuss household income and incidence of poverty. To do so, we need to know some demographic characteristics of the households such as size of households, number of income earners and the percentage of households with women as the main income earners. This is essential since these households are characterized largely by female-headed ones where male earning members are absent.

i. The beneficiary - the adult female – is the main bread earner

The average household size has remained the same, in the vicinity of 3, during the project period in both control and treatment groups. Note that average household size is 4.2 at the national level. Average number of income earners was 1.56 in treatment group and 1.70 in control group and the difference was not statistically significant. Comparison with baseline shows that number of income earners has increased more rapidly in the control group than in the treatment group. We can argue that since female household heads had guaranteed job for 18 months, other members of the households, particularly the children, did not have to engage in income earning activities. About 93% of the households in the treatment group reported in the end-line survey that the adult female member was their main bread earner. This figure was about 86% in the control group. Both the control and treatment groups saw similar growth in number of households with female as the main income earner during the project period. That the average number of income earners is greater than one implies that other household members also contribute to the household income, though they are not the main income earners.

Table 5.1: Household size and number of income earners

Variables	Baseline			End-line			Diff-in-diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Average HH size	3.15	3.01	-0.14	3.03	2.93	-0.10	0.04
Average Number of Income Earners	1.41	1.52	0.11	1.70	1.56	-0.14	-0.25
% of HH with Female as Main Income Earner	79.30	86.13	6.83	86.03	92.88	6.84	0.01

- ii. *An increase in yearly ‘gross’ income of about 40 thousand Taka can be attributed to SWAPNO*

Table 5.2: Household and per capita income

Variables	Baseline			End-line			Diff-in-diff
	Control	Treatment	Diff	Control	Treatment	Diff	
HH Yearly Income (taka)	27121	24713	-2408	45210	81905	36696	39,104***
Average Per Capita Yearly Income (taka)	9366	9354	-12.58	16145	32439	16294	16,306***

*** High statistical significance at 1% level

** Medium statistical significance at 5% level

* Low statistical significance at 10% level

Average yearly household income (gross) in the treatment group in end-line survey was about 82 thousand Taka. This figure was about 45 thousand Taka in the control group. Note that the beneficiaries earned about 60 thousand Taka per year during the project.

When we compare with the baseline data, we find that the average yearly household income experienced a drastic increase from taka 27,121 to taka 45,210 (67% increase) for control households and from taka 24,713 to taka 81,905 (231% increase) for treatment households. This drastic increase is at odds with the country’s growth rate or the rate of poverty alleviation. It is important to clarify at the outset that the modules used for capturing the income in the end-line survey were different from those of the baseline survey. While the end-line modules were very comprehensive, the baseline survey followed a very parsimonious approach to capture all sources of income. Our view is that the baseline income was under-reported. However, it is important to understand that as long as both the control and treatment groups are underreported in similar ways at the baseline, it does not impact the difference-in-difference estimators. The difference-in-difference estimate is about 40 thousand Taka. It means that SWAPNO contributed about 40 thousand Taka to the yearly household income of the beneficiaries. In per capita terms, this amount is about 16 thousand Taka.

The measurement error in income data has always been a debatable issue. In order to triangulate our results, we collected MIS data from the project. Local project staff also collects data on various sources of income of the beneficiary households which distinguishes between the income of the beneficiary and the income from other family members. It is reported in Table 5.3.

Table 5.3: Income of the beneficiary households from MIS data

District	Beneficiary’s income (monthly average)	Other family member’s income (monthly average)	Total family income (monthly average)
Kurigram	4394	491	4785
Satkhira	6319	361	6680
Total	5194	437	5631

Source: MIS, SWAPNO, UNDP

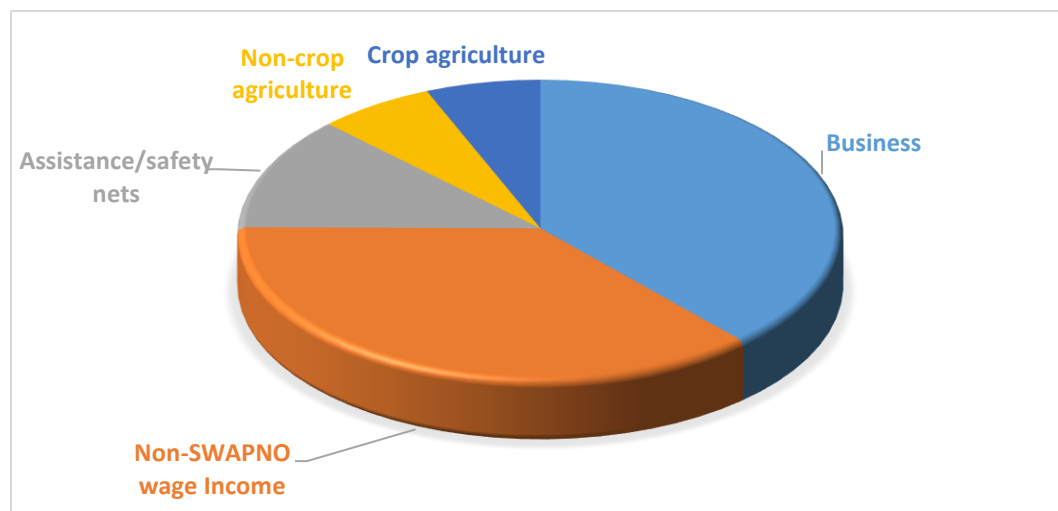
The above table shows that average yearly income of a beneficiary household is about 67,572 Taka and this excludes the mandatory savings. Note that our estimate of household income net of mandatory savings stands at 67,145 Taka which is very close to the MIS data. It offers greater confidence on our estimates.

iii. Beneficiaries were able to generate additional income beyond the project's

Earlier we noted that households' yearly gross income exceeds wage income from SWAPNO by about 22 thousand Taka. That the household income is higher than the project income is also confirmed by MIS data. Now the question is: where does the additional amount come from? It is interesting to note that their household income has other sources than SWAPNO. We learnt from Table 5.1 that average number of income earners was about 1.6 in the treatment group. Moreover, it has been found that some beneficiaries had started their IGAs during the project period. FGDs also reveal that as their working hour ends by 2 pm, the beneficiaries had time to work for their own IGAs as well as for wage payment (e.g. in rice husking chitals).

Figure 5.1 plots the distribution of the source of additional income. It shows that the major sources are non-SWAPNO wage income and income from business and they constitute about three-fourths of additional income. The shares of crop and non-crop agriculture are still very low. One argument is that their investment in land market and also in IGAs such as poultry and livestock are yet to yield returns.

Figure 5.1: Distribution of sources of additional income for the beneficiaries



iv. Most of the beneficiaries have invested their graduation bonus

At the time of interview, about 93% of beneficiaries (746 out of 800 beneficiaries) were found to have received the graduation bonus, while 380 beneficiaries out of 746 (51%) were found to have spent their graduation bonus. Most of the spending was found to be in productive investment. Table 5.4 reports the number of beneficiaries who have spent their bonus, partially or fully, and the average spending amount. It shows that 159 beneficiaries have already invested in livestock and the mean size of investment is about 19,500 Taka. 39 beneficiaries have invested about 16 thousand Taka on average in businesses. Apart from typical IGAs, 59 beneficiaries have either bought or rented land with the bonus. The mean amount is about 19 thousand Taka. About 11 thousand Taka was spent on house construction and repair as well.

Among the beneficiaries who spent on household expenditure, daily household expenditure and medical expenditure stood out. We found one beneficiary who spent all her bonus in marrying off her daughter.

Table 5.3: Use of SWAPNO bonus

	No of Beneficiaries	Mean of spending amount (BDT)
Poultry	7	3485.71
Livestock	159	19487.74
Wood work	2	10200.00
Other business	39	16482.05
HH expenditure	80	2832.50
HH medical expenses	20	6147.50
Education expenditure	1	2000.00
Marriage of children	1	22000.00
House repair/construction cost	31	10695.16
Buying/leasing of land	59	18848.31
Repay the loan	26	12165.38
Others	67	12180.60

Note: The number of beneficiaries does not add up to 380 as there are overlaps.

v. The beneficiaries have greater access to agricultural land market (rental)

We will see in Table 5.9 that average size of own landholding has not changed. Further, Table 5.3 indicates that the beneficiaries have either rented in or bought farm land from the graduation bonus. Taken together, we can conclude that the farm land has been rented not bought out of the graduation bonus. This is a remarkable shift of occupation from only wage labour to a mix of wage labour and farming. This matches the national trend which shows that the wage employment for rural women has decreased.

Table 5.4 shows how the amount of land under lease and sharecropping contracts of the beneficiaries and also control groups has changed from the baseline. Amount of land under fixed rent contract (i.e. lease) has increased from about 0.56 decimal at baseline to about 4.7 decimals in the end-line for the beneficiaries. For the control group, this change is from 0.19 decimal to 0.85 decimal. The diff-in-diff coefficient is about 3.5 decimals, which is statistically significant at 1% level. It implies that SWAPNO contributed to the increase in access to land under fixed rent contract by about 3.5 decimals. There is only a small change in land under sharecropping contract and the difference is not statistically significant. It also corroborates with the national trend of shifting the contract for land from sharecropping to fixed rent.

Table 5.4: Land under lease and share contracts (decimal)

Type of land contract	Baseline			End-line			Diff-in-diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Lease In (fixed rent contract)	0.193	0.560	0.367	0.852	4.700	3.848	3.482***
Share In (sharecropping)	0.0798	0.287	0.208	0.703	0.816	0.112	-0.0953

vi. Increase in gross income indicates significant reduction of incidence, extent and severity of poverty

First, we estimate the number of poor based on ‘gross’ income of the households. Though the full income has not been at the disposal of the households, it is still a part of their income.

Before SWAPNO, about 96% of households in the control groups and 95% households in the treatment groups were extreme poor – that is below the lower poverty line. Note that the lower poverty lines for Kurigam and

Satkhira are 1762 Taka and 1811 Taka per month per household member respectively in the end-line. These figures were 1586 Taka and 1630 Taka at baseline. Hence, the treatment and control groups were very similar in terms of poverty status when the baseline survey was conducted. After 18 months of tenure in SWAPNO project, the income of the beneficiaries increased more than three times and this has reduced the incidence of poverty. End-line survey shows that only 28% of the treatment households were below the lower poverty line. This figure is still very high in the control group - about 81%. The difference-in-differences estimates show that about 52% reduction of extreme poverty can be attributed to SWAPNO.

We don't observe significant differences between Kurigram and Satkhira in terms of reduction of poverty due to SWAPNO. About 26% of the households in Kurigram and 30% in Satkhira are below the upper poverty line in the beneficiary groups after SWAPNO. The contribution of SWAPNO in reducing extreme poverty in these two districts is 54% and 50% respectively.

Table 5.5A: Lower Poverty Line (% of HH below lower poverty line)

	Baseline			End-line			Diff-in-Diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Overall	95.76	94.63	-1.13	80.80	27.88	-52.92	-51.79***
Kurigram	96.02	93.5	-2.52	82.09	26	-56.09	-53.57***
Satkhira	95.5	95.75	0.25	79.5	29.75	-49.75	-50.00***

Table 5.5B: Upper Poverty Line (% of HH below upper poverty line)

	Baseline			End-line			Diff-in-Diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Overall	97.26	95.00	-2.26	84.04	34.5	-49.54	-47.28***
Kurigram	97.51	93.50	-4.01	84.58	31.75	-52.83	-48.82***
Satkhira	97.00	96.50	-0.50	83.50	37.25	-46.75	-45.75***

Now consider the upper poverty line. The upper poverty lines in the end-line in Kurigram and Satkhira are 1847 Taka and 2027 Taka respectively and they were 1663 Taka and 1825 Taka respectively at baseline. About 97% of control group households and 95% of households in the treatment group were moderately poor before the interventions of SWAPNO started. After 18 months with SWAPNO, the increased income of the beneficiaries helped reduce moderate poverty to 35%. In the control group, the incidence of moderate poverty is reduced to about 84%. Thus, we can attribute about 47% reduction of moderate poverty to SWAPNO. The reduction of poverty is found slightly higher for Kurigram than Satkhira, similar to extreme poverty.

Table A5.1 in appendix shows that there has been significant change in the lower part of income distributions (20th, 30th, and 40th percentiles) of the treatment group and this is also reflected in lower poverty gap and squared poverty gap measures. Poverty gap index, which captures the depth of poverty, has reduced from 0.59 in baseline to 0.27 in end-line for the treatment group. Similarly, poverty gap squared, measuring the severity of poverty, has gone down to 0.10 from 0.39.

vii. Mandatory saving lowered poverty status of many households during the project period

We have considered the 'gross' income which includes the mandatory saving of SWAPNO paid at the end of project employment in Tables 5.5. They show what would happen if all of income was spent on consumption. But, in reality, a part of the current consumption during the project period was postponed for higher future income. This may have lowered their standard of living as well as their poverty status. To probe this, we calculate the number of poor households below the poverty lines using 'disposable' income net of mandatory savings.

Tables 5.6A and 5.6B show that 40% households are below the lower poverty line and 53% households are below the upper poverty line when we use ‘disposable’ income net of graduation bonus. The contribution of SWAPNO in reducing poverty has now been reduced to only 40% and 30% for extreme and moderate poverty respectively. With the reduction of 25% of the gross income, 12% additional households slipped below the lower poverty line, which indicates the welfare loss of the households’ due to mandatory saving. This also highlights the importance of investing the saving in productive purposes so that future stream of income can offset the welfare loss during the project period.

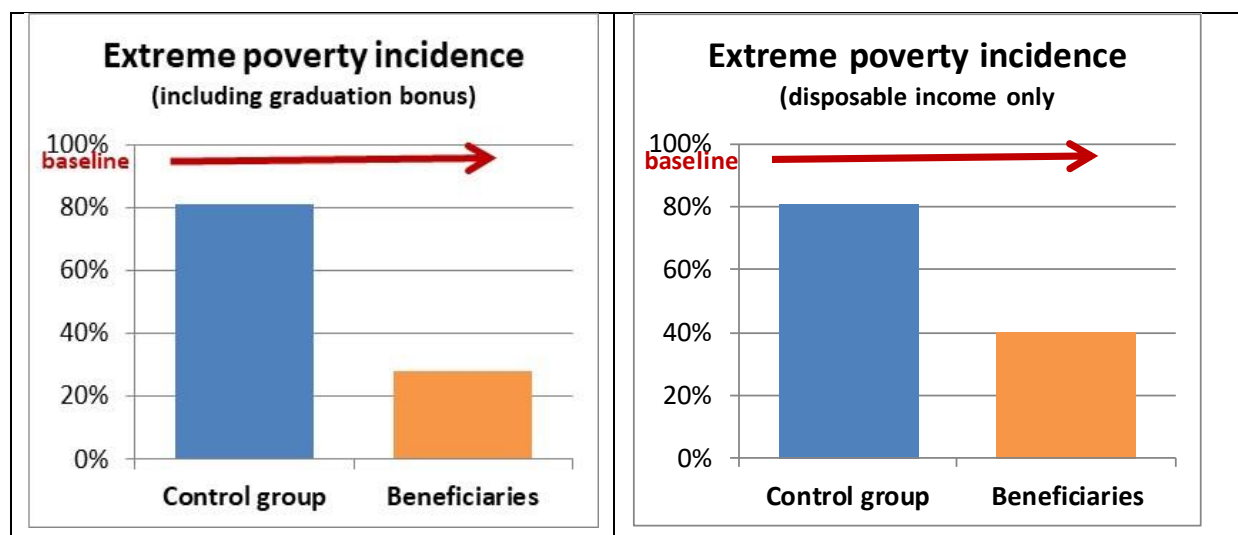
Table 5.6A: Percentage of households below lower poverty line (with disposable income)

	Baseline			End-line			Diff-in-Diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Overall	95.76	94.63	-1.136	80.80	40.00	-40.80	-39.66***
Kurigram	96.02	93.50	-2.52	82.09	40.25	-41.84	-39.32***
Satkhira	95.50	95.75	0.25	79.50	39.75	-39.75	-40.00***

Table 5.6B: Percentage of households below upper poverty line (with disposable income)

	Baseline			End-line			Diff-in-Diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Overall	97.26	95.00	-2.26	84.04	52.50	-31.54	-29.28***
Kurigram	97.51	93.50	-4.01	84.58	42.75	-41.83	-37.81***
Satkhira	97.00	96.50	-0.50	83.50	62.25	-21.25	-20.75***

Figure 5.2: Incidence of extreme poverty with and without graduation bonus



From methodological point of view, it is important to note that money-metric poverty lines – both upper and lower – are estimated from HIES 2010. These are reported in terms of per capita monthly income. However, during the baseline (in 2015) and end-line (in 2017) the poverty-line income (per capita monthly income of 2010) cannot buy the same basket of goods and services as it could in 2010. Therefore, we adjusted the poverty-line income upward using Consumer Price Index. Further, we did not convert all members of the household into adult-equivalent in order to get per capita income. Therefore, our poverty measures have some upward-biases. That is, we are overestimating the number of poor; the actual number could be lower.

Table A5.2 reports percentiles, poverty gap and poverty gap squared for ‘net income’, net of graduation bonus. It shows that SWAPNO did not contribute to reducing poverty gap but it helped reduce severity of poverty.

5.2 Household Expenditure

viii. In addition to food, non-food expenditure has also increased both in absolute and relative terms for the beneficiaries

Annual household expenditure has increased by about 20 thousand Taka, from about 36 thousand Taka in pre-intervention period to about 56 thousand Taka in post-intervention for the treatment group. Households in the control group experienced about 10 thousand Taka increase in household expenditure. Beneficiary households have spent substantially more than the control groups on food, clothing, and education. All these increases in expenditure are attributable to SWAPNO as the difference-in-difference estimators are highly statistically significant.

Food expenditure has increased by about 1 thousand Taka for the treatment group. Of this increase, about 450 Taka can be attributed to SWAPNO.

Table 5.7: Average expenditure (BDT) of households before and after intervention

	Baseline			End-line			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
Food (monthly)	2439	2292	-147	3013	3320	307	454***
Clothing (yearly)	1327	1053	-274	3167	3623	456	730***
Medical (yearly)	1774	1965	191	2607	2866	259	68
Education (yearly)	1027	1014	-13	1803	2372	569	582***
Others (yearly)	6972	4756	-2216	6647	7363	716	2,932***
Total (yearly)	40362	36287	-4075	50378	56060	5682	9,758***

Non-food expenditure has increased not in absolute terms only, but in relative share also for the beneficiaries. In the treatment group, food expenditure is still about 72% in the end-line, down from 79% in the baseline. Share of expenditure on clothing is about 7% of total household expenditure, up from only 3% at baseline. The share of education expenditure has also increased. The difference-in-difference estimates are also statistically significant for clothing and education.

5.3 Asset and Land Holdings

ix. Livestock is now the main asset of the beneficiaries

We have already observed in above tables that the beneficiaries have invested their savings, both voluntary and mandatory, in productive investment such as livestock, poultry, fisheries, trees, etc. On average, mean value of livestock for the treatment group increased from about 2 thousand Taka at baseline to about 21 thousand Taka in end-line. About 16 thousand Taka increase in value of livestock can be attributed to SWAPNO project. In case of poultry, the value of assets has increased from about 4 hundred Taka to about 18 hundred taka and project contribution is about 13 hundred Taka. Similar results are found for fisheries and trees. Households also built asset in forms of household durables, capital machineries and precious metals.

Among all types of assets, livestock constitutes about 43% of total assets, which was only 13% before SWAPNO. There has been a drastic change in the composition of household assets from baseline to end-line. Household durables make up about 54% of total assets in both treatment and control group at baseline. This composition has eventually changed with SWAPNO for the treatment group. The share of household durables declined to 19% for treatment households. This shift in composition of assets from unproductive (which does

not yield income) to productive ones is a life-changing event for the beneficiaries which has significant implications for the sustainability of the outcome of the project.

Table 5.8: Mean value (BDT) of asset (non-land, non-financial)

	Baseline			End-line			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
Livestock	2279	1927	-352	5136	20757	15621	15,973***
Poultry	452	369	-83	552.9	1777	1225	1,308***
Fisheries	0	0	0	147	1757	1610	1,610***
Tree	769	554	-215	1954	4144	2190	2,405***
Household Durables	2568	2381	-187	3436	4862	1427	1,614***
Capital Machinery	122	151	29	779	888	109	80
Precious Metals	699	630	-69	1140	2347	1207	1,276***
Others	179	118	-61	1838	2406	568	629***
Total	7068	6131	-937	14982	38940	23957	24,894***

x. The beneficiaries did not invest in agricultural land

Table 5.9: Average size of own land holdings (decimal)

Types of Land	Baseline			End-line			Diff-in-diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Homestead land	1.276	0.801	-0.475	2.040	2.189	0.149	0.624
Cultivable land	0.254	0.907	0.653	20.50	18.88	-1.624	-2.277

Table 5.9 indicates that the size of homestead land farm land has not changed in the end-line from the baseline for both control and treatment groups. The savings of the beneficiaries were not enough to purchase farm land, FGD reveals.

xi. The housing condition also remained same, though the access to electricity has increased

Table 5.10: Housing and fuel

Variable	Baseline			End line			Diff-in-Diff
	Control	Treatment	Diff	Control	Treatment	Diff	
% of HH with different types of houses (1 st room)							
Pukka	1.76	0.63	-1.13	0.74	0.37	-0.37	0.76
Semi pukka	6.03	4.68	-1.35	1.50	1.75	0.25	1.60
Tin shed house	58.00	56.60	-1.46	75.80	75.90	0.10	1.56
Kaccha/bamboo/straw	34.20	38.10	3.93	21.90	22.00	0.10	-3.83
% of HH with mostly used fuel for cooking							
Wood	19.20	21.00	1.80	37.41	39.38	1.97	0.17
Coal	0.25	0.38	0.13	0.75	0.50	-0.25	-0.38
Straw	73.57	70.25	-3.32	58.85	58.00	-0.85	2.47
Gas	1.00	0	-1.00	0.50	0.13	-0.37	0.63
Jute stick/chalk	0	0	0	39.40	41.88	2.48	2.48
Cow dung	2.99	4.87	1.88	12.97	18.75	5.78	3.90
Electricity	0.25	0.38	0.13	0	0	0	0.13
% of HH with access to electricity	17.21	14.88	-2.33	40.90	47.13	6.227	8.559**

Table 5.3 shows that only 31 households have spent about 11 thousand Taka on average from their graduation bonus on repairing and construction of their houses. However, Table 5.10 indicates that the changes in housing condition of the beneficiaries have not been noteworthy when we consider all households. Share of households with pukka, semi pukka or tin shed houses have not increased significantly for the beneficiary households. In case of fuel, types of fuel have not changed much but the share of households with access to electricity has increased substantially for the beneficiary households.

Appendix

TableA5.1: Income percentiles and other measures of poverty based on gross income

Variable	Baseline			End-line			Diff-in-Diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Income of 10th percentile	322.9	317.7	-5.2	485.7	1105	619.3	624.5
Income of 20th percentile	427.5	422.2	-5.3	664.6	1286	621.4	626.7*
Income of 30th percentile	550	494.3	-55.7	849.5	1413	563.5	619.2**
Income of 40th percentile	633.3	587.5	-45.8	989.7	1795	805.3	851.1***
Poverty Gap	0.575	0.594	0.0189	0.468	0.271	-0.198	-0.217***
Squared poverty gap	0.371	0.391	0.0210	0.268	0.102	-0.166	-0.187***

Table A5.2: Income percentiles and other measures of poverty based on 'net' income

Variable	Baseline			End-line			Diff-in-Diff
	Control	Treatment	Diff	Control	Treatment	Diff	
Income of 10th percentile	322.9	317.7	-5.2	485.7	820.5	334.8	340.0
Income of 20th percentile	427.5	422.2	-5.3	664.6	917	252.4	257.7
Income of 30th percentile	550	494.3	-55.7	849.5	1079	229.5	285.2*
Income of 40th percentile	633.3	587.5	-45.8	989.7	1265	275.3	321.1**
Poverty Gap	0.575	0.594	0.019	0.468	0.471	0.0032	-0.0158
Squared poverty gap	0.371	0.391	0.021	0.268	0.239	-0.0286	-0.049***

Chapter 6

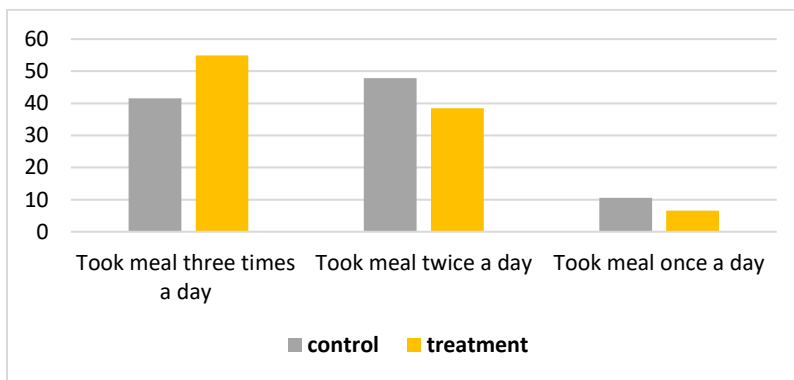
Food Security and Coping with Disasters

6.1 Food Security

Expenditure on food reported in Table 5.7 shows that beneficiaries now spend about 3320 Taka on food per month and this amount is about 1 thousand Taka higher than baseline. This increase in food expenditure for the treatment group offsets the increase for the control group in the same period by about 450 Taka. This is the contribution of SWAPNO. This highlights the fact that the SWAPNO participants were more food secured during the project period.

i. Share of households taking meal only once or twice a day is lower for the treatment group

Figure 6.1: Number of times meal taken a day in last one year (% of HHs)



We asked respondents to report their frequency of taking meals. About 55% of the beneficiaries and 42% of the control group women reported that they took meal three times a day but could not eat to heart's content. Share of households who skipped one meal is reported to be lower for the treatment group - about 38% beneficiaries and 48% control women reported that they had meals only twice a day. The share of households with acute food crisis is also much lower for the treatment group – 7% treatment vs. 11% control.

ii. While both the control and treatment groups show improved diet diversity, beneficiary households have substantially larger improvements, with basically no households being food poor

Frequency of meals taken is important for food security, but does not capture diet diversity. We used the Food Consumption Score (FCS) developed by WFP to find out how diversified the meals were. FCS is a frequency-weighted diet diversity score, using a one-week recall period for consumption of eight food groups: main staples; pulses; vegetables; fruit; meat, fish and eggs; milk; sugar; oil. Households are grouped into four categories – Poor (food insecure), Borderline cases (food secure but vulnerable), Acceptable low and Acceptable high food security – with thresholds determined for the Bangladesh context.

Around 18% of beneficiary households were found to have poor diet diversity at baseline, with only 1% categorized as poor at end-line. Some improvement was recorded also for the control group, 7% now being food poor as against almost 16% at baseline. Almost 74% of beneficiary households now have acceptable diet diversity, compared with only one-third at baseline, and the majority of them have an acceptable high food security. The acceptable diet diversity of control households has improved to a lesser degree; up from 40% of households to around 56%.

Diversified food consumption is much better in Satkhira district, where 90% of beneficiary households scored acceptable levels, as against only 58% in Kurigram. At baseline, both districts recorded around one-third of beneficiary households with acceptable food diversity. This implies that Satkhira households have been able to improve their diet diversity much more than households in Kurigram, where 40% are still borderline cases. This difference between districts can be partly explained by a more diverse availability of food items in Satkhira.

Table 6.1: Food Consumption Score

Consumption	Kurigram				Satkhira				Total			
	Beneficiary	%	Control	%	Beneficiary	%	Control	%	Beneficiary	%	Control	%
Poor Consumption, <=28	6	1.5	23	11.4	3	0.8	6	3.0	9	1.1	29	7.2
Borderline, 28-42	161	40.3	99	49.3	40	10.0	50	25.0	201	25.1	149	37.2
Acceptable Low, 43-52	92	23.0	47	23.4	78	19.5	50	25.0	170	21.3	97	24.2
Acceptable High, >52	141	35.3	32	15.9	279	69.8	94	47.0	420	52.5	126	31.4
Total	400	100	201	100	400	100	200	100	800	100	401	100

Table 6.2: Food Consumption Score against Baseline Status

Consumption	Baseline						End-line					
	Kurigram (%)		Satkhira (%)		Total (%)		Kurigram (%)		Satkhira (%)		Total (%)	
	Beneficiary	Control	Beneficiary	Control	Beneficiary	Control	Beneficiary	Control	Beneficiary	Control	Beneficiary	Control
Poor, <=28	20	18.4	16.2	13.0	18.1	15.7	1.5	11.4	0.8	3.0	1.1	7.2
Borderline, 28-42	43.5	46.8	48.5	43.0	46.0	43.9	40.3	49.3	10.0	25.0	25.1	37.2
Acceptable >42	36.5	36.8	35.2	44.0	35.9	40.4	58.3	39.3	89.3	72.0	73.8	55.6
Total (n)	400	201	400	200	800	401	400	201	400	200	800	401

iii. While both the control and treatment groups reported the similar months as the months of acute food crisis, average number of days with acute food crisis is much lower for the treatment group.

Food insecurity has a seasonal pattern – certain months of the year are characterized by lesser opportunities of work for the wage laborers. Table 6.3 records share of households reporting a particular month as the month of maximum food deficit and the average number of days with acute food deficit. Most of the households in both treatment and control groups reported that they experienced highest food deficit from Ashar to Kartik (mid-May to mid-October). For example, 14% households in both treatment and control groups reported Ashar as the month of maximum food deficit. Interestingly, still 21% of households in the treatment reported Ashin (August/September) as the worst month, while 14% of the control households reported the same. Average number of days with acute food crisis per month is about 5.2 days, whereas this number is 11.5 for the control group.

Table 6.3: Food deficit by seasonality

Month	% of HHs reporting this month with maximum food deficit	Average number of days with acute food deficit	% of HHs reporting this month with maximum food deficit	Average number of days with acute food deficit
	Treatment		Control	
Boishakh*	4.4	7	5.8	10.1
Joishtha	1.1	10	3	10.9
Ashar	14.3	7.7	14.2	10.9
Shrabon	19.8	7.5	14.4	10.6
Bhadra	17.6	6.2	7.9	10.4
Ashshin	20.9	5.5	13.7	11.6
Kartrik	15.4	7.9	19.7	12.1
Ogrohayon	0		4.4	10
Poush	0		10.8	15.8
Magh	1.1	5	0.4	11.7
Falgun	0		1.3	11.6
Choitra	5.5	5.4	14.3	11.7

* The Bangladesh calendar year begins mid-April with the month of Boishakh.

6.2 Coping with Natural Disasters

One of the objectives of the interventions of SWAPNO is that the beneficiaries will be more climate-change resilient and better equipped with the coping strategies for climate change induced natural disasters such as flood, cyclone, river erosion, draught, etc. We consider five types of coping strategies in three phases of disaster – before, during and after. The coping strategies include i) borrowing, ii) asset sale or mortgage, iii) sale of labour, iv) relief or assistance, and v) temporary migration. These coping strategies are new addition to the end-line survey and therefore we cannot compare them with the baseline.

i. In the pre-disaster phase, coping strategies are similar for both treatment and control groups.

In the pre-disaster phase, the major coping strategy is the sale of labour which includes advance sale. About 85% of control households and 84% of treatment households coped by selling labour before the disaster strikes (Table 6.4). The beneficiaries also sold or mortgaged assets in this phase.

ii. Beneficiaries rely more on own asset for coping than borrowing from others during shock

The sale or mortgage of assets becomes the dominant strategy during shocks and it is used more by the beneficiaries than the control group. 81% of the households in the treatment group and 66% of the households in the control group sold or mortgaged assets during disasters. In the post shock period, the sale of asset is also wide spread. Note that assets include household savings, durables, business capital, trees, and ornaments. It indicates that beneficiaries are now more able to cope with disaster with their own asset, particularly their own savings. During shocks, share of households who borrowed from relatives, NGOs and *Mohajan* is less for the treatment group. As we know from the anecdotal evidence, '*Dadon*' (loan from *Mohajan*) becomes very widespread after any natural disaster and this credit charges very high interest rate - sometimes as high as 200%. We found such evidence after the cyclone Roanu in Chittagong and Moheshkhali in 2016.

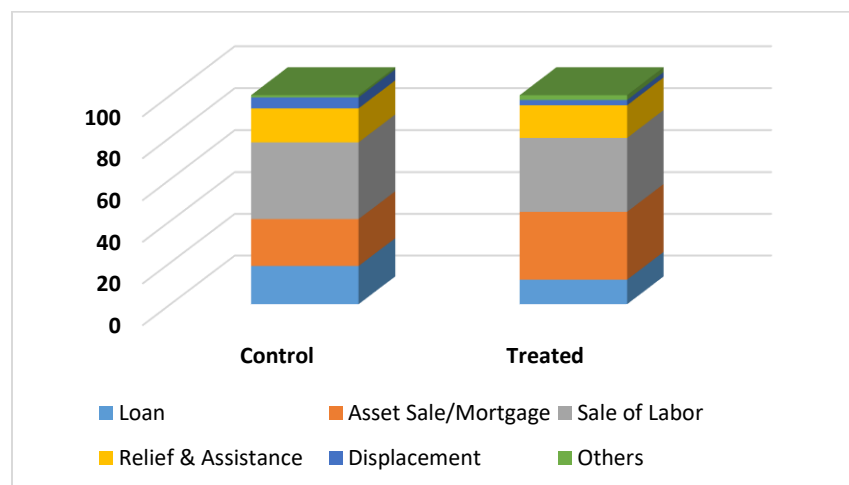
iii. Incidence of displacement or migration is lower for the beneficiary group

In both phases – during and after – incidence of temporary displacement and migration has been found to be lower for the beneficiaries. During disasters, about 10% of the households in the control group and 6% of the households in the treatment group have experienced temporary displacement or migration. This difference is also statistically significant. In the post disaster period, the rate of temporary displacement is much lower for the treatment group than the control group.

Table 6.4: Households (%) with different coping strategies

	End-line		
	Control	Treatment	Difference
Strategies before shocks			
Loan	0	0.53	0.53
Asset sale/mortgage	4	4.23	0.23
Sale of labour	85.33	83.60	-1.73
Relief & assistance	8	6.88	-1.12
Temporary displacement	0	0.53	0.53
Others	2.67	4.23	1.56
Strategies during shocks			
Loan	9.76	3.51	-6.25**
Asset sale/mortgage	65.85	80.70	14.85***
Sale of labour	4.88	5.26	0.38
Relief & assistance	9.76	4.39	-5.37**
Temporary displacement	9.76	6.14	-3.62*
Strategies after shocks			
Loan	34.44	24.88	-9.56***
Asset sale/mortgage	25.56	39.44	13.88***
Sale of labour	8.89	4.70	-4.19**
Relief & assistance	24.44	27.70	3.26
Temporary displacement	6.67	1.88	-4.79*
Others	0	1.41	1.41

Figure 6.2: HH (%) with coping strategies for all phases



Chapter 7

Education, Health and Nutrition

7.1. Education of children

i. Education outcome of the children has not changed much

From Table 5.7 we observe that expenditure on education has increased from about 1 thousand Taka per year at baseline to 2400 Taka in the end-line for the beneficiaries and an increase in 6 hundred Taka can be attributed to SWAPNO. While we observe an increase in education expenditure, education outcome has not changed much. Share of school going children has remained unchanged statistically. The reason is that this share was very high to begin with in the baseline survey. About 97% of the school going children were going to school before the intervention. Interestingly, among those who are enrolled in schools, share of children not attending school is lower for the treatment group. Note that choice of outcome variables is constrained by the baseline survey, which primarily focuses on school attendance.

Table 7.1: Child education

	Baseline (%)			End-line (%)			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
Percentage of school going children going school	96.70	97.26	0.56	92.78	95.07	2.29	1.73
If yes: go to school							
Regularly	89.39	90.67	1.28	85.93	92.04	6.11	4.83
Irregularly	10.61	9.33	-1.28	2.22	1.38	-0.84	0.44
Not entirely	0	0	0	11.85	6.57	-5.28	-5.28**

7.2 Health of beneficiary women

ii. Beneficiaries now perceive to have better health despite little change in scientific measures

Though medical expenditure of the beneficiary group has increased from about 2 thousand Taka per year to 2.9 thousand Taka, this change is not statistically significant when we compare it with the change in the control group. Table 7.2 reports frequency of being sick and treatment seeking pattern of both the control and treatment groups. The SWAPNO beneficiaries reported to be sick less frequently than the control group. About half of the beneficiaries reported that they hardly fell sick in the last one year compared to 42% of the control women. There is not much difference between treatment and control group in terms of types of medical services they availed. However, there is evidence of lower incidence of visit to quacks by the beneficiaries.

Table 7.2: General health of women

	Baseline (%)			End-line (%)			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
How many times have you been sick in the last 12 months?							
Frequently	4.27	4.01	-0.26	6.73	4.87	-1.86	-1.60
Occasionally	50	54.26	4.26	55.61	46.38	-9.23	-13.49***
Hardly ever	45.73	41.73	-4.00	37.66	48.75	11.09	15.09***
How have your family members been sick in the last 12 months?							
Frequently	14.96	12.53	-2.43	7.73	7	-0.73	1.70
Occasionally	48.82	50.13	1.31	60.10	57.50	-2.60	-3.91
Hardly	36.22	37.33	1.11	32.17	35.50	3.33	2.22

	Baseline (%)			End-line (%)			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
In the last 12 months, where did you take treatment (last meeting)?							
I did not receive treatment	3.54	4.84	1.30	1.00	0.13	-0.87	-2.17*
We have treated ourselves	1.01	0.892	-0.118	0.249	0.125	-0.124	-0.006
MBBS doctor	20.71	19.11	-1.60	3.24	3.62	0.38	1.98
Rural doctor	59.85	56.43	-3.42	35.66	30.25	-5.41	-1.99
Kabiraj	1.01	1.15	0.14	0.50	0.13	-0.37	-0.51
Maulvi/Sadhu/Ojha	0	0	0	0.50	0.25	-0.25	-0.25
Quack	1.52	2.55	1.03	2.00	0.63	-1.37	-2.40**
Pharmacy	6.82	9.55	2.73	9.23	9.25	0.02	-2.71
Community clinic	0.51	1.02	0.51	33.17	38.63	5.46	4.95
Private hospitals	0.253	0.255	0.002	1.496	2.375	0.879	0.877
Government hospitals	3.03	2.29	-0.74	12.47	14.50	2.03	2.77
Others	1.77	1.91	0.14	0.50	0.12	-0.38	-0.52

Kabiraj is a traditional health provider. *Maulvi* is a Muslim religious healer, while *Sadhu* and *Ojha* are Hindu healers.

The cut-off point of Body Mass Index (BMI) is 18.5 kg/meter-squared., according to WHO. Women with BMI below this point are considered to be deprived of basic nutrition. Table 7.3 shows that on average the BMI indices of the respondent women are higher than the cut-off point in both control and treatment groups at baseline and end-line. It is likely that the healthier women self-selected into the programme knowing the type of works they had to perform.

There has been no change in the BMI of beneficiaries' due to SWAPNO. BMI of the beneficiary and the control group women were almost same in the baseline and changed little after the project (Table 7.3). It has to be borne in mind that the beneficiary women were engaged in physically strenuous job for 18 months. In our questionnaire, we asked the beneficiary to comment on the extent the public work was physically strenuous. About 90% reported that it was physically demanding. This physically demanding job for a prolonged period may have implications for the BMI of the beneficiaries.

Table 7.3: BMI of the women (kg/meter-sq)

	Baseline			End-line			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
BMI of respondent	20.42	20.54	0.12	21.21	21.15	-0.06	-0.18

We also asked about the perception of their current health condition compared to the situation two years ago in absence of SWAPNO. In the absence of baseline information, we rely on recall observations only. The proportion of women reporting better health increases over the period, while proportion reporting worse health decreases, when we compare differences in responses between control and treatment group. It implies that while the measure of BMI indicates no improvement, women's perception about their health condition has improved. It indicates that they now feel better about their health than they used to do two years ago despite their engagement in physically demanding work.

Table 7.4: How do you describe your health in general?

	Two years ago (%)			Currently (%)			Difference in Difference
	Control	Treated	Diff	Control	Treated	Diff	
Very poor	0.249	1.875	1.626	0.998	0.250	-0.748	-2.373***
Poor	15.21	21.50	6.288	11.22	2.750	-8.472	-14.76***
Satisfactory	48.88	49.75	0.872	40.15	12.88	-27.27	-28.15***
Good	33.42	25.38	-8.041	41.90	66.75	24.85	32.90***
Very good	2.244	1.500	-0.744	5.736	17.38	11.64	12.38***

7.3 Water and sanitation

Table 7.5: Water and sanitation

	Baseline (%)			End-line (%)			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
What is the source of water for your food?							
Tube well	87.72	88.35	0.63	91.27	92.63	1.36	0.73
Well	0.50	0.38	-0.12	0.25	0.50	0.25	0.37
Pond	6.27	6.39	0.12	3.24	2.12	-1.12	-1.24
River	0.25	0	-0.25	0	0.13	0.13	0.38
Reserve rain water	2.76	0.88	-1.88	0.25	0.50	0.25	2.13**
Tap/supply water	0.75	0.63	-0.12	3.24	3	-0.24	-0.12
Others	1.75	3.38	1.63	1.75	1.13	-0.62	-2.25*
Do you have toilet in your premise?							
Yes	78.04	75.52	-2.52	84.54	91.13	6.59	9.11***
What kind of toilet/toilet type is?							
Hole closet	25.66	27.46	1.80	14.16	8.23	-5.93	-7.73**
Slab latrine	66.96	65.07	-1.89	81.71	84.22	2.51	4.40
Water seal slab	0	0.90	0.90	2.66	6.72	4.07	3.17**
Hanging closet	5.90	5.52	-0.38	1.48	0.82	-0.66	-0.28
Others	1.48	1.05	-0.43	0	0	0	0.43
Where do you toilet?							
Hole closet	22.19	25.06	2.87	12.22	7.38	-4.84	-7.71**
Slab latrine	66.58	63.36	-3.22	68.83	76.88	8.05	11.27***
Open space field	5.22	4.33	-0.89	10.72	6.50	-4.22	-3.33
Water seal slab	4.44	4.58	0.14	2.49	6.50	4.01	3.87**
Hanging closet	0.26	1.40	1.14	1.00	0.38	-0.62	-1.76**
Others	1.30	1.27	-0.03	4.74	2.38	-2.36	-2.33*

iii. SWAPNO has been found to have impact on use of hygiene latrine but not safer water

The beneficiaries are not found to use safer source of water than the control group. However, it is reported that the beneficiaries use more reserve water than the control group. The beneficiaries are more likely to have toilets in their premises. About 91% of the beneficiaries have reported to have toilets in their premises, compared to 76% of the control women. Most of the respondents have slab latrine – about 84% of the beneficiaries and 82% of the control group. Moreover, the beneficiaries are more likely to use water seal slab

toilets and are less likely to use hole closet than the non-participants. There is, therefore, some indication that the beneficiaries are using more hygiene latrines than the control group and SWAPNO has a role to play. Note that the training programme of SWAPNO includes a module on health and nutrition which taught sanitation and hygiene practices. However, better hygiene can be the outcome of both income effect and training.

7.4 Child health

iv. Average height and weight of children have not changed significantly due to SWAPNO

Table 7.6: Child's height and weight

	Baseline			End-line			Difference in Difference
	Control	Treatment	Diff	Control	Treatment	Diff	
Average child age				34.20	29.82	-4.38	
Average height of children (cm)	86.36	82.79	-3.57	83.15	78.74	-4.41	-0.84
Average weight of children (kg)	10.75	10.36	-0.39	10.76	10.63	-0.13	0.26

Chapter 8

Women Empowerment and Aspiration

Public works based ‘graduation model’ is argued to be different from direct asset transfer based model on the ground that the former enhances women empowerment and boosts self-confidence and aspiration, which are the key ingredients of the sustainability of the project outcomes. Beneficiaries build assets from their hard-earned income from guaranteed employment in the public work based model. The fact that destitute women earn, save and build assets on their own gives them self-confidence and self-esteem. Since these issues are central to the justification of choosing public works based model over direct asset transfer, we discuss these issues in detail in this chapter.

In literature, the issue of women empowerment has been approached and measured in many different ways, including female educational attainment, labour force participation, women’s decision-making ability, and intra-household resource allocation by gender, and women’s self-esteem and other psychosocial measures. As the project aims at enhancing women’s productivity by improving their ability and opportunities, this should result in more efficient labour market outcome for women and systematically enhance women’s empowerment. We therefore study how women’s ability to make decisions within their households has improved over the project period. The guaranteed employment could empower women since the lack of women’s influence in intra-household decision-making can be partly explained by the traditional gender norm that restricts women’s link to market-based activities. Participating in public works programme under a guaranteed employment scheme could work as a catalysing factor towards inclusion in social networks. This facilitates formation of new friendship, enabling women to join social groups and public meetings, exposure to formal work life and interactions at the work place. ROSCA participation could enhance a sense of unity and support among these women, in addition to facilitating access to income-generating activities. Hence, SWAPNO is expected to help develop group solidarity, self-confidence, aspiration and access to service providing institutions. Early field evidence suggests that beneficiary women are invited to community mediations, social gatherings and functions and as a result their social status seems to have been upgraded. This can affect their own sense of self-esteem and aspiration – their personal feeling about themselves; worthiness in family and society as well as self-efficacy – their belief about themselves to succeed towards goals despite challenges. The project is expected to have significant impact on these empowerment indicators.

- i. The beneficiary women have higher control over personal and household assets than their non-participant counterpart*
- ii. The beneficiaries are now more able to make decisions about IGAs on their own, thanks to SWAPNO*

In Table 8.1, we report certain outcome variables denoting women’s empowerment. These include women’s control over personal and family income and assets as well the extent they can make their own decisions. In the absence of baseline information about control over income and asset, we only provide end line comparison, which is only indicative of the impact of SWAPNO. For other outcome indicators, we provide estimates of double difference, meaning differences in outcome between baseline and end line comparing treatment and control groups. We report significant increase in the proportion of women reporting their greater control over own income and asset. About 91% of women in the treatment group, as against about 80% women in the control group, reported to have full control over their immovable or movable property. We found similar magnitude of difference for family assets too. Beneficiary women are also found to report higher decision making ability in income generating activities. SWAPNO contributed about 53% increase in the share of women involved in making decision about IGAs. While it is somewhat obvious that the treatment group women had access to income and training to engage in further income generating activities, this also indicates that their ability to make decision on their own will help them sustain their income in the absence of the programme.

Table 8.1: Women Empowerment Indicators: Control over income and assets and intra-household decision making

	Baseline (%)			End line (%)			Difference in Difference
	Control	Treated	Diff	Control	Treated	Diff	
Control over personal income and asset							
I myself can decide to use my personal income				89.78	95.38	5.60**	
I myself can decide to use my own savings				89.28	95.25	5.97**	
I have full control over my immovable/movable property				80.05	90.63	10.58***	
Control over household asset							
I have influence over the use of family income and savings				81.80	90.75	8.95**	
I have influence over family land				75.31	86.75	11.44**	
I have influence over family immovable/movable assets				75.31	87.25	11.94***	
Decision making new income earning activities							
Women involved with any income generating activities	72.82	68.50	-4.318	47.38	95.63	48.24	52.56***
Decision of income generating activity was taken by women	0.80	0.84	0.04	0.71	0.83	0.12	0.08**
Decision of income generating activity was taken Jointly with a male	0.055	0.033	-0.022	0.279	0.168	-0.112	-0.09***
Decision of income generating activity was taken after consulting woman	0.0301	0.0153	-0.0148	0	0.00125	0.00125	0.0161*
No involvement in decision making	0.118	0.112	-0.00584	0.0125	0.00125	-0.0112	-0.00538

iii. The beneficiaries are more mobile than before outside their community due to SWAPNO

Another dimension of women empowerment is their mobility as opposed to traditional gender norm internalized by men. Women are often restricted in terms of their mobility outside home, limiting their access to economic and social intuitions. As reported in Table 8.2, our treatment group women reportedly have shown improvement in terms of this specific indicator. While we do not find any significant improvement in terms of their mobility within closer community, we observe significant improvement for their mobility outside home (sub-district and district level mobility), facilitating their access to various market and social institutions as a result of programme participation.

Table 8.2: Women Empowerment Indicators: Mobility as freedom

	Baseline (%)			End line (%)			Difference in Difference
	Control	Treated	Diff	Control	Treated	Diff	
Mobility outside community (para/village)							
Herself	99.25	99.75	0.50	99	99.13	0.13	-0.37
Accompanied by male	0.75	0.25	-0.50	0.50	0.38	-0.12	0.38
Accompanied by others in a group	0	0	0	0.50	0.50	0	0
No outside mobility							
Mobility within the union territory							
Herself	93.77	94.47	0.70	96.01	98.13	2.12	1.42
Accompanied by male	1.50	1.51	0.01	1.25	0.75	-0.50	-0.51
Accompanied by others in a group	4.49	3.89	-0.60	2.74	1.12	-1.62	-1.02
No outside mobility	0.25	0.13	-0.12	0	0	0	0.12
Mobility within the Upazila territory							
Herself	62.00	63.44	1.44	76.56	85.13	8.57	7.13*
Accompanied by male	12.25	11.18	-1.07	8.98	6.00	-2.98	-1.91
Accompanied by others in a group	23.25	21.48	-1.77	13.72	8.38	-5.34	-3.57
No outside mobility	2.50	3.89	1.39	0.75	0.50	-0.25	-1.64
Mobility within district or divisional city							
Herself	28.50	30.23	1.73	45.89	64.75	18.86	17.13***
Accompanied by male	29	23.55	-5.45	22.94	14.13	-8.81	-3.36
Accompanied by others in a group	31.25	33.63	2.38	28.68	19.63	-9.05	-11.43***
No outside mobility	11.25	12.59	1.34	2.49	1.50	-0.99	-2.33

- i. Beneficiaries are found to be more optimistic about their future*
- ii. The self-esteem of the beneficiaries is also found to be significantly higher*

In order to assess women’s improvement over life skill management through self-confidence, self-efficacy and self-esteem, we include several questions related to these and rely on recall information in the absence of baseline data for both control and treatment group women. It is expected that individuals with high self-efficacy would view difficult goals as a challenge, while individuals with low self-efficacy would view the same goal as beyond achievable. As reported below, treatment group women appear to be highly optimistic about the future, show substantially and significantly higher optimism about achieving their future goals and show positive assessment of goal realization. These results are consistent with the high self-efficacy as well we higher self-esteem as discussed below.

In order to capture a measure of individuals’ self-esteem, we ask several questions consistent with Rosenberg self-esteem scale (Rosenberg 1965; Society and the adolescent self-image, Princeton University Press) and record level of agreement (strongly disagree, disagree, agree and strongly agree) to statements such as 1) generally speaking I am satisfied with myself, 2) often I think I am a powerless person, 3) often I think I have certain quality, 4) I think I do not have anything to be proud of, 5) sometimes I think I am worthless, 6) sometimes I think I have importance in society. Then we calculate sum of each responses to define the self-esteem score. In the absence of baseline data, we ask individuals to recall and record what would be their responses (level of agreement) considering their position two years ago. So, for both treatment and control

group of respondents we use recall data for baseline. We compute z-score with equal weight on each response and then aggregate the scores. The z-score is computed by subtracting sample mean from the raw score and dividing the difference by respective standard deviation. As we observe there has been significant increase in self-esteem among treatment women compared to control women in terms of standard deviation (over 1 S.D).

The proportion of women reporting to be willing to make new friends compared to two years ago were 10.6 percentage points higher in treatment group compared to control group respondents.

Table 8.3: Women empowerment through enhancing self-confidence and self esteem

	Two years ago (%)			Currently (%)			Diff-in Diff
	Control	Treated	Diff	Control	Treated	Diff	
Have future plan for life?	46.88	34.75	-12.13	64.84	87.13	22.29	34.42***
How optimistic are you in implementing your future plan?							
Not quite optimistic	9.57	13.31	3.74	1.25	0	-1.25	-4.99**
Somewhat optimistic	25	29.14	4.14	25.44	12.88	-12.56	-16.70***
Fairly optimistic	45.21	39.93	-5.28	69.83	70.13	0.30	5.58
Very optimistic	20.21	17.63	-2.58	3.49	17	13.51	16.09***
In retrospect, do you think the goal you set two years ago are accomplished?							
Accomplished				5.32	8.27	2.95	
Somewhat accomplished				45.21	79.14	33.92	
Nothing accomplished				49.47	12.59	-36.88	
Self-esteem indicator (Z Score)	0.153	-0.0769	-0.230	-0.650	0.326	0.976	1.206***
Are you willing to make new friends?	12.97	12.25	-0.72	21.20	31.13	9.93	10.65***

Chapter 9

Training: What Did the Beneficiaries Learn?

The training programme is an integral part of the graduation model followed by SWAPNO project with two major objectives: i) improving the basic life skills through awareness building regarding their rights and entitlements, and ii) improving basic knowledge and skill for running an IGA such as arithmetic skill, technical knowledge on cow-fattening, poultry, etc. SWAPNO offered 7 different courses on life skills and livelihoods for its beneficiaries. Union workers and other trade specific personnel were hired to teach these courses. A typical livelihood training is a five-day course, while a life skill training runs for a day. Participation in the training was regarded as an on-job training and the participants were paid their regular wages for taking part in the courses.

First, we will investigate the overall perception of the participants about the training and later we will study the impact of training on their knowledge. Note that in our questionnaire we asked some specific questions which are taken from the course modules taught in the training programme.

9.1 Participation in training

i. The participation rate was high in all courses

It is to be noted that while project records show that all beneficiaries participated in training courses, the findings of this survey are based on recollection of the beneficiaries. According to what beneficiaries now can remember, each of the training modules had participation rates higher than 70% while four of the training modules saw above 80% participation of the beneficiaries. The ‘*Women Rights’ and Entitlements*’ module had the largest participation (about 89%), while ‘*Gender & Development*’ module had the lowest (about 71%). While 10 (1.25%) of the SWAPNO beneficiaries reported receiving no training at all, 356 (about 45%) of them received training from all 7 modules, as they can now recall. About 88% of the beneficiaries received training of 4 or more modules.

Table 9.1: Participation in each Training Module

SN	Name of the Training	Participation	
		Number	%
1	Preparation of Business	582	72.75
2	Simple Accounting	640	80.00
3	Climate Change	625	78.13
4	Health & Nutrition	705	88.13
5	Gender & Development	565	70.63
6	Women Rights & Entitlements	711	88.88
7	Leadership Development	669	83.63

9.2 Perception of the beneficiaries about the courses

ii. Beneficiaries found the courses useful; they learnt new things and applied in their lives

Almost all the beneficiaries were aware of each of the 7 different training modules and reported that the knowledge learnt from the modules were relevant to real life. Almost 98% of the beneficiaries report applying knowledge learnt from the module ‘*Simple Accounting*’ in real life, while about 58% used the knowledge gained from the module ‘*Leadership Development*’. A large proportion of the respondents report sharing the knowledge from the training modules with their own household members as well as their neighbours.

The beneficiaries were also asked to rank the usefulness of each module on a scale of 1 to 7, with 1 being the least useful and 7 being the most useful (Table A9.1). In general, the beneficiaries tended to order the livelihood trainings as most useful, followed by the life skills trainings. About 56% of the beneficiaries ranked the module ‘Preparation of Business’ as the most useful (order = 7), while about 35% gave ‘Simple Accounting’ the 6th rank (order=6). About 29% and 39% respectively ranked the modules ‘Gender & Development’ and ‘Leadership Development’ as the least useful (order=1). Beneficiaries were also asked to evaluate the extent of new knowledge learnt from each of the training modules. The majority of them (90% or more of the respondents) reported that they learnt many new things from the training modules.

Table 9.2: Self-evaluated usefulness of the training modules

SN	Name of the Training	Knows about the training	Real life relevance of the knowledge learnt from the training	Applied knowledge learnt from the training in real life activities	Shared the acquired knowledge with other HH members	Shared the acquired knowledge with neighbours
1	Preparation of Business	791 (98.88)	785 (99.24)	744 (94.06)	727 (91.91)	742 (93.81)
2	Simple Accounting	794 (99.25)	793 (99.87)	778 (97.98)	730 (91.94)	715 (90.05)
3	Climate Change	792 (99.00)	783 (98.86)	578 (72.98)	710 (89.65)	733 (92.55)
4	Health & Nutrition	793 (99.13)	792 (99.87)	744 (93.82)	722 (91.05)	739 (93.19)
5	Gender & Development	791 (98.88)	726 (91.78)	426 (53.86)	621 (78.51)	644 (81.42)
6	Women Rights & Entitlements	790 (98.75)	760 (96.20)	504 (63.80)	653 (82.66)	684 (86.58)
7	Leadership Development	792 (99.00)	737 (93.06)	462 (58.33)	652 (82.32)	681 (85.98)

9.3 Module specific test of knowledge

iii. Beneficiaries have better knowledge on IGA and accounting than the control group

Table 9.3: Simple accounting and IGA related knowledge responses

Number of factors mentioned correctly	Treatment	Control
0	6	29
1	33	90
2	101	120
3	153	83
4	182	49
5	159	25
6	62	3
7	42	0
8	50	0
9	12	2

The respondents were asked to mention some factors to consider before undertaking any IGA. These factors are taken from training material of the ‘*Preparation of Business*’ module. There were 9 options in total for naming such factors. 6 (0.8%) respondents of the treatment group were unable to mention a single consideration correctly, while the same number for the control group is 29 (7.2%). Only 12 beneficiaries could mention all of the 9 considerations correctly while 2 of the respondents from the control group also managed to achieve the same feat. About 21% of the beneficiaries could mention 6 or more considerations correctly while the same figure for the control group is a meagre 1.2%.

The respondents were also asked to solve a simple Profit and Loss problem based on the content of the ‘*Simple Accounting*’ training module. 652 (81.5%) of the beneficiaries reported the correct answer while 298 (74.3%) of the control respondents could do the same. The share of correct answer was higher for the treatment group and it is statistically significant.

9.4 Knowledge about violence and places to lodge complaints

Table 9.4: Reporting on violence related knowledge

Response/Frequency	Treatment	Control
Aware about where to make complaints if subjected to violence/harassment	756 (94.97)	370 (91.36)
Places of lodging complaints		
Shalish (Mediation)	188 (24.87)	91 (24.59)
Village Court/Court of law	78 (10.32)	30 (8.11)
Police/Law enforcing agency	57 (7.54)	32 (8.65)
Victim Support Centre	6 (0.79)	2 (0.54)
Union Parishad (UP)	312 (41.27)	132 (35.68)
Village elders/Morol/Matbor/others	115 (15.21)	83 (22.43)

iv. There is hardly any difference in knowledge on violence between treatment and control group

The beneficiaries were asked about their knowledge on the places of lodging formal complaints if they face any violence. It is based on the ‘*Gender & Development*’ training module. The majority of the respondents are aware of where to complain if subjected to violence, with the treatment respondents slightly favouring the Union Parishad (UP) to make complaints compared to the control respondents. There is hardly any difference in knowledge between these two groups in where to go if they are subjected to violence.

9.5 Knowledge about rights and entitlements

v. Beneficiaries are more aware of their rights than the control group

The knowledge of the respondents is tested on issues of rights and entitlements (based on the content of the ‘*Women Rights & Entitlements*’ training module). More than 90% of the respondents from each group are aware of inheritance rights. A much larger proportion of treatment respondents (about 78%) are aware of citizens’ rights compared to control respondents (about 49%). About half of the beneficiaries are aware of their right to

getting food, while this share is about one-fourth for the control group. The component of citizens' rights that respondents are most aware of is 'the right to vote', while the component they are least aware of is 'the right to education', in case of both groups. About 61% of the treatment women and 41% of the control women are aware of their right to vote. In case of education, about 30% and 8% women in treatment and control groups respectively are aware that it is their right.

Table 9.5: Rights and Entitlements

Variable Name	Treatment	Control
Aware of inheritance rights	773 (96.63)	377 (94.01)
Aware of citizens' rights	622 (77.75)	195 (48.63)
Frequency of mentioning each aspect of citizens' rights:		
Food	411 (51.38)	97 (24.19)
Clothing	293 (36.63)	37 (9.23)
Place to live	306 (38.25)	64 (15.96)
Healthcare services	296 (37.00)	61 (15.21)
Education	239 (29.88)	31 (7.73)
Right to vote	487 (60.88)	164 (40.90)
Right to receive services from UP and Upazila	284 (35.50)	97 (24.19)

9.6 Knowledge about laws

Table 9.6: Knowledge about laws

SN	Variable Name	Response	Treatment	Control
A	Multiple Marriage/Polygamy Law			
1	Steps a wife can take if her husband takes part in polygyny without her prior consent			
	a. File a lawsuit	<i>Yes</i>	710 (88.75)	315 (78.55)
	b. Apply for a divorce	<i>Yes</i>	128 (16.00)	25 (6.23)
	c. Claim 'Mahr' payments from husband	<i>Yes</i>	197 (24.63)	74 (18.45)
	d. Try mediation through 'Shalish' (arbitration)	<i>Yes</i>	507 (63.38)	230 (57.36)
	e. No steps can be taken, continue to be with husband	<i>Yes</i>	21 (2.63)	17 (4.24)
B	Child Marriage Law			
2	Reported minimum age for marriage of girl child (in years)	18	783 (97.88)	386 (96.26)
		20	17 (2.13)	15 (3.74)

SN	Variable Name	Response	Treatment	Control
3	Reported minimum age for marrying off unmarried female household member (in years)	18	783 (97.88)	386 (96.26)
		20	17 (2.13)	15 (3.74)
4	Aware that arranging child marriage (of children aged below 18 years) is a punishable offence	Yes	791 (98.88)	379 (94.51)
5	Mentions of possible punishments for arranging child marriage:			
	a. Punishment for the groom (imprisonment/fine)	Yes	425 (53.13)	177 (44.14)
	b. Punishment for the bride (imprisonment/fine)	Yes	255 (31.88)	100 (24.94)
	c. Punishment for the groom's guardians (imprisonment/fine)	Yes	621 (77.63)	251 (62.59)
	d. Punishment for the bride's guardians (imprisonment/fine)	Yes	619 (77.38)	253 (63.09)
	e. If adult groom and child bride, groom may face imprisonment/fine	Yes	133 (16.63)	34 (8.48)
	f. If guardians arrange marriage for child bride and child groom, guardians may face imprisonment/fine	Yes	212 (26.50)	79 (19.70)
C	Dowry Prohibition Law			
6	Have paid or will pay dowry in daughters' marriage	Yes	125 (22.89)	90 (33.71)
		<i>Nos. of responses</i>	546	267
7	Have taken or will take dowry in sons' marriage	Yes	59 (10.35)	41 (13.53)
		<i>Nos. of responses</i>	570	303
8	Aware that receiving or paying dowry is a punishable offence	Yes	794 (99.25)	387 (96.51)
9	Mentions of possible punishments for receiving or paying dowry:			
	a. Dowry provider may face imprisonment/fines	Yes	501 (62.63)	208 (51.87)
	b. Dowry receiver may face imprisonment/fines	Yes	573 (71.63)	282 (70.32)
	c. Both may face imprisonment/fines	Yes	427 (53.38)	129 (32.17)
10	Mentions of possible punishments if husband/in-laws torture wife for dowry payments			
	a. May face legal fines	Yes	458 (57.25)	192 (47.88)
	b. May face imprisonment	Yes	720 (90.00)	320 (79.80)
	c. No punishment applicable	Yes	23 (2.88)	9 (2.24)
D	Divorce Law			
11	Mentions of legally recognized methods of divorce in the country			
	a. Spoken Talaq (Triple Talaq)	Yes	273 (34.13)	171 (42.64)
	b. Divorce through legal procedures	Yes	680 (85.00)	272 (67.83)
	c. Both methods lead to divorce	Yes	134 (16.75)	43 (10.72)

vi. *The beneficiaries are more aware of the punishments in laws for polygamy, child marriage, dowry and divorce than the control groups*

Respondents of both groups are more or less similarly familiar with the steps a wife can take if her husband practices polygamy without her prior consent, with the most reported courses of action being filing a lawsuit and trying mediation through ‘*shalish*’ (a social system for informal settlement of petty disputes by local notables). The treatment group is found to be more aware of divorce and claim ‘*Mabr*’ payments from the husband (*mabr* is a means of sustenance for the wife in case of divorce).

Almost all the respondents, both treatment and control, reported that the minimum age for marriage of a girl child is 18 years and were aware that child marriage is a punishable offence. While both groups are aware of the different punishments for arranging child marriage, a greater proportion of the treatment group respondents are aware of the punishments, with the most mentioned types of punishment being imprisonment/fine for the bride’s and groom’s guardians.

While almost all respondents are aware that receiving or paying dowry is a punishable offence, some of them still received/paid or expect to receive/pay dowry in the marriage of son/daughter. Respondents of both groups are more or less similarly aware of the punishments for practicing dowry and for torturing the wife for dowry payments. While the majority of the respondents reported that divorce through legal method is formally accepted in the country, a significant number of them also reported that spoken *talaq* (Islamic divorce stating the word *talaq* three times) also leads to divorce and this is more prevalent among the non-beneficiaries.

Appendix

Table A9.1: Self-reported ordering of the training modules based on usefulness

SN	Rank of Usefulness	Name of the Training						
		<i>Preparation of Business</i>	<i>Simple Accounting</i>	<i>Climate Change</i>	<i>Health & Nutrition</i>	<i>Gender & Development</i>	<i>Women Rights & Entitlements</i>	<i>Leadership Development</i>
1	1	44 (5.56)	24 (3.02)	110 (13.89)	31 (3.91)	228 (28.82)	62 (7.85)	308 (38.89)
2	2	28 (3.54)	29 (3.65)	106 (13.38)	39 (4.92)	159 (20.10)	217 (27.47)	200 (25.25)
3	3	28 (3.54)	45 (5.67)	114 (14.39)	56 (7.06)	185 (23.39)	220 (27.85)	139 (17.55)
4	4	52 (6.57)	100 (12.59)	217 (27.40)	134 (16.90)	113 (14.29)	119 (15.06)	59 (7.45)
5	5	70 (8.85)	178 (22.42)	127 (16.04)	237 (29.89)	61 (7.71)	76 (9.62)	43 (5.43)
6	6	129 (16.31)	281 (35.39)	93 (11.74)	182 (22.95)	24 (3.03)	57 (7.22)	24 (3.03)
7	7	440 (55.63)	137 (17.25)	25 (3.16)	114 (14.38)	21 (2.65)	39 (4.94)	19 (2.40)

Chapter 10

Through the lens of SDGF Evaluation Criteria

The Sustainable Development Goals (SDGs) succeeds the Millennium Development Goals (MDGs), building on the experiences, lessons learnt and best practices of the latter. The SDG Fund is an initiative that provides assistance to sustainable development activities through integrated and multidimensional Joint UN Programmes and acts to facilitate the transition from the MDGs to the SDGs. Strengthening Women's Ability for Productive New Opportunities (SWAPNO) is a development programme undertaken by the Local Government Division (LGD) of Bangladesh and UNDP as a Joint UNDP-ILO Programme. As per the requirement of the SDG Fund, all Joint Programmes have to commission an independent final evaluation. The current report presents the final evaluation of the SWAPNO project in line with the SDG Fund requirement.

Relevance

The beginning of the 7th Five Year Plan (FYP) of Bangladesh coincided with the launch of the United Nations SDGs and as such, the plan has made accommodations to achieve several of the SDG targets within the stipulated time. In line with the SDGs, the 7th FYP aims to reduce poverty through a broad-based strategy of inclusiveness and attain sustainable economic growth that is resilient to climate change. In particular, the plan has specific strategies in place to deal with poverty and inequality, gender issues, social protection, climate change and disasters and sustainable development pathways.

SWAPNO is a public works based social safety net programme which is part of the current social protection strategy of the government of Bangladesh. At the same time, it also falls under the United Nations Development Assistance Framework (UNDAF) **Outcome 2.1:** *Economic growth is achieved in an inclusive manner, extending opportunities to the rural and urban poor and protecting the vulnerable from shocks.* The expected programme outputs correspond to **Output 2.1.2:** *Poor families are less vulnerable to external shocks through greater access to financial and insurance services, social safety nets with clear graduation strategies.*

The main objective of the SWAPNO project is to address the needs and vulnerabilities of the ultra-poor and the marginalized, and in the process provide them a pathway out of poverty. Hence, SWAPNO targets ultra-poor female headed households (who are usually the most vulnerable and lacking in economic opportunities) to receive the set of programme interventions. SWAPNO utilizes both protection and promotion strategies and works to provide a long-term solution to poverty and inequality reduction. This not only corresponds to the 7th FYP but also with the long term Perspective Plan of the country, to achieve sustainable growth in an inclusive manner.

SWAPNO is a programme of LGD, MLGRD&C of the Government of Bangladesh in partnership with UNDP-ILO and with local NGOs assisting implementation. While development programmes implemented by NGOs (e.g. BRAC's TUP-CFPR) and private sector consulting companies (such as the Chars Livelihoods Programme) have been successful in reducing poverty in the country, they are limited in their scope in achieving government ownership and the potential for national level delivery. Government ownership of development programmes can enable such efforts to continue for longer periods of time and has the potential for national level replicability. Hence building on the experiences of another successful UNDP programme REOPA, SWAPNO involves the local government as the implementing agency.

Effectiveness

An initial baseline survey for the project was conducted in August 2015 on a sample of 1200 households from Kurigram and Satkhira districts. The survey employed the RCT design and 800 households receiving project benefits (i.e. the beneficiaries) were taken as the treatment group, while 400 others served as the control. The

baseline survey supplemented by an end line one on the same sample of households, conducted between May-June of 2017. This section presents the key findings from the comparisons between the baseline and end line observations.

A substantial increase in income and assets of the beneficiaries can be observed between the two periods as well as a drastic reduction in poverty, both moderate and extreme. The households are now more food secure and expenditure on non-food items, particularly education, has increased. The households also had diversified sources of income as they earn from IGAs (Income Generating Activities) and non-SWAPNO labour income. Most of the beneficiaries have invested their 'graduation bonus' money in livestock, poultry or other productive assets. Livestock were found to be the main assets of the beneficiaries at the end line, accounting for 43% of total assets (up from 13% at baseline). The graduation bonus has also helped the beneficiaries with greater access to agricultural land market as they are now leasing in land. At the same time, a shift in occupation from wage labour to a mix of farmer and wage labour can be observed.

While there is little change in measures of health conditions like BMI, beneficiaries' perception of their own health has improved at the end line but no significant impact on children's education or health is observed. In coping with disasters, the beneficiaries' strategies now rely more on personal savings than high interest rate loans. SWAPNO beneficiaries have better knowledge on IGAs and accounting than the control group, while they are also found to be better informed on laws and punishments for polygamy, child marriage, dowry and divorce. Additionally, the beneficiaries have greater control over personal and household assets, are more mobile outside their community and are more optimistic about their lives in the future compared to the control respondents.

Good practices and replicable experiences

This section highlights some of the good practices and experiences learnt from the implementation of the SWAPNO project.

- The role of Union Workers - While the UPs are the implementing agency of the project, they are limited in their capacity in terms of the required manpower. Therefore, SWAPNO Union Workers (UWs) were hired by the Partner NGOs to fill this gap. The role of the UWs was that of a catalyst that expedited the overall operations of the project. The UWs played crucial roles in almost all the steps of programme implementation, ranging from helping in beneficiary selection, supervising ROSCA and fortnightly meetings, monitoring work, providing life skills and livelihoods training, counselling the women, helping in receiving wage payments, maintaining different records and updating the MIS database among others. In short, the UWs were the backbone of the entire project delivery mechanism.
- Community monitoring of public works – while this mechanism was originally introduced in the REOPA project, the success led to its replication in the SWAPNO programme as well. A banner with the schedule of work activities, progress of work and the time allocated for each type of work was placed near each of the worksites. It served to inform the general people about the schedule of different work activities so that they can easily verify if the women are working properly and timely. Therefore, it offered some form of community monitoring of the public works in the programme.

Efficiency

The parameters pertaining to the efficiency of the programme was not studied as part of the end line evaluation of the SWAPNO project. To fully assess the efficiency of the joint programme management model as well as meaningfully compare it to single-agency interventions would be the scope of another study with different objectives in mind. Similarly, the study also did not explore the cost structure and expenditure patterns of the programme.

But we do have some estimates of the unit cost comparison between SWAPNO and the Chars Livelihoods Programme (CLP) which used beneficiary identification approaches similar to SWAPNO. The unit cost per core beneficiary household (excluding direct costs not targeting the core beneficiaries) in CLP Phase 2 is estimated at USD 1740. SWAPNO has an estimated unit cost of USD 1460, of which USD 1060 is the value of monetary benefits received by core beneficiaries. Additionally, it is also estimated that of this unit cost, USD 1170 will be equal to the communities' benefits of having well maintained or repaired public assets. Therefore, the per beneficiary cost shows that SWAPNO compares favourably with other similar programmes and the public works nature of the programme generates additional benefits for the communities.

An interesting point to note is that the Government has a greater ownership stake in the SWAPNO project, committing to share 25% of the total project cost, a large jump from just 1.7% in the case of the previous REOPA project. Hence it shows that this joint programme has contributed to the progress of fostering national ownership processes and outcomes.

The project employed several methods to enhance the overall efficiency of operations. For example, it introduced community monitoring of public works to ensure quality of work and engage the local community at the same time. It also introduced the practice of revision of the training materials so that the beneficiaries can better retain the new knowledge and thus improve the effectiveness of the training. The project used bank accounts to deliver the fortnightly wages and the graduation bonus to the beneficiaries, thereby avoiding the possible leakage of funds if the payments were made in cash instead.

While the SWAPNO programme aims to expand the holding of productive assets by the poor households, it does not follow the model of Asset Transfer Programmes (where assets are transferred to the poor unconditionally). But rather it takes the route of public works based employment where the beneficiaries have to work to receive the different project benefits including income. Therefore, when beneficiaries invest in the assets of their choice, they have a greater sense of ownership of the assets instilled in them and are less likely to use them in unproductive ways. This helps to improve the efficiency of the model as when the beneficiaries use their assets to generate further income, the process of graduation gets set into motion, which is the ultimate goal of the programme.

The programme also placed a large emphasis on the practice of group savings (or ROSCA) to promote the savings habit of the beneficiaries and encouraged them to invest the savings in productive assets. This not only helped the beneficiary households to expand their asset base during the project period, but at the same time also provided a scope for the beneficiaries to experiment with different IGAs before moving on to larger investments with their graduation bonus. The counselling and monitoring by the Union Workers on the different IGAs undertaken by the women after receiving the graduation bonus also played an important role. All such activities helped to improve the efficiency of the programme and boost the confidence of the beneficiaries in conducting different IGAs, thereby improving their likelihood of graduation out of poverty.

While this section does shed some light on the methods and practices adopted by the project to improve efficiency in operation, a full assessment of the efficiency context of the SWAPNO programme is beyond the scope of the end line study and would require follow up studies with additional objectives in focus.

Impact

SWAPNO focuses on the graduation out of poverty of ultra-poor female headed households. It strives to achieve so by employing a *public works plus* social safety net programme. While one of the goals of the programme is to support and guide the beneficiary households to expand their productive asset base, a complementary but equally important objective is to develop the human capital of the poor and vulnerable women. Improving human capital will allow the beneficiaries to be more productive, better equipped to take advantage of opportunities, more aware of different entitlements, rights and laws and as a result, lead a better-

quality life than before. Therefore, this joint programme not only aims for gender mainstreaming but also focuses on the empowerment of women. At the same time, as the programme engages the local government by using the Union Parishads (UPs) as the implementing agency and local NGOs as the implementing partner, it also works towards establishing public private partnerships (PPPs) in development initiatives.

The programme is built around the model of poverty graduation and evidence from such models employed across different countries and across various settings show that its effect on poverty reduction in the long term is very promising. Therefore, while the scope of the end line study does not permit analysis of sustainability of the project impacts, prior experience of similar interventions suggests that they are likely to sustain in the long run.

Contribution to the SDGs

Since SWAPNO aims to provide a pathway out of poverty to poor and vulnerable female headed households, its objectives coincide with many of that of the Sustainable Development Goals (SDGs). The list below presents the SDGs which are closest to the objectives of SWAPNO.

- **SDG 1** - *End poverty in all its forms everywhere*
- **SDG 2** - *End hunger, achieve food security and improved nutrition, and promote sustainable agriculture*
- **SDG 3** - *Ensure healthy lives and promote well-being for all at all ages*
- **SDG 4** - *Ensure inclusive and equitable quality education and promote life-long learning opportunities for all*
- **SDG 5** - *Achieve gender equality and empower all women and girls*
- **SDG 9** - *Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*
- **SDG 16** - *Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels*

The primary objectives of SWAPNO clearly coincides with SDG 1 (reducing poverty), SDG 5 (gender mainstreaming and women empowerment) and SDG 9 (build and repair climate resilient public assets and infrastructure). At the same time, SWAPNO also works to reduce food insecurity and improve the nutritional status of beneficiaries (SDG 2), promote practices for good health and well-being (SDG 3), provide basic knowledge, arithmetic skills and small business-related knowledge to the beneficiaries (SDG 4) and improve the capacity of local institutions for pro-poor service delivery (SDG 16).

End line evaluation of the SWAPNO project shows that it had a significant positive impact on the beneficiaries. Income and asset holding of the project participants have increased substantially, while there has been a drastic reduction in poverty. Food security has improved, expenditure on education has increased and the households now have diversified sources of income thanks to the IGAs undertaken. A shift in occupation of the beneficiaries from wage labour to a mix of farmer and wage labour can also be observed, indicating greater self-sufficiency. At the same time, the beneficiaries are more knowledgeable on issues of IGA, accounting, rights, entitlements and laws, are more mobile outside their community and more optimistic about their lives in the future than the control group members. These suggests that the women are now more empowered than before.

While SWAPNO aims to reach and lift 65,000 ultra-poor women out of poverty, the pilot phase of the project had an outreach to around 4500 core beneficiary households. SWAPNO employed a robust mechanism for identifying and targeting the poor households which minimized the inclusion errors associated with beneficiary selection. It might be noted here that there was usually a large number of potential applicants, suggesting the necessity for more development projects in the future to address the needs of the poor.

Sustainability

Given the fact that the end line survey was conducted soon after the end of project employment, the end line study can only capture the short term impacts, that is, it only evaluates what happened during the project period. However, there are indications that the short-term impact of the project is likely to sustain, though the extent of sustainability can be debated. The first major indication is the amount and type of productive investment the beneficiaries made out of their wage income and mandatory saving. Second, the beneficiaries have learnt some basics of running a business as well as basic arithmetic. This has boosted their self-confidence which is reflected in their discourse, body language and attitude. Third, the beneficiaries now have greater control over their assets, while at the same time their mobility has increased along with self-confidence, self-efficacy and aspiration. All these indicators strongly suggest that the beneficiaries now aspire to live a better life and they will continue to do so in the absence of the project. But to fully assess and document the sustainability of the project impacts, a follow-up survey needs to be conducted at least one year after the project end. Similarly, the extent of longer term impacts can be explored through subsequent surveys.

While the SWAPNO pilot phase was only carried out in two districts, the model is scalable and the plan is that from the third year, it will begin a cascading expansion at the national level to another 20 districts of the country.

Chapter 11

Conclusion: Some Insights on Project Design

i. Addressing dual objectives of wellbeing of the beneficiaries and public works

It is important to note that the success of the project doesn't depend on how effectively public works have been done. The beneficiaries may just sit idle and draw their salary and all the outcomes of the project pertaining to the wellbeing of the beneficiaries can be achieved. That is, if wellbeing of the beneficiaries becomes the sole focus of the project, it will beat the purpose achieving dual objectives of public works and poverty alleviation.

The success of the SWAPNO approach – public works built in safety net programme with complementary inputs – depends on two ingredients- i) effective public works, and ii) boosting women's confidence and aspiration. Note that the provision of SWAPNO type safety net programme is very costly, which involves high delivery and monitoring cost. The government and the development partners are willing to incur such high costs because they believe that the benefits of these two ingredients will outweigh the high operational cost. If it does not, direct transfer of asset such as livestock would be a preferred option. If the moral hazard problem in public works is high, it neither builds public asset nor does it help women build their self-confidence and esteem. The feeling that they are in a regular job which earns bread and butter for their families may get attenuated and replaced by the feeling of getting freebees.

ii. Is 18-month work-fare long enough?

There is hardly any experimental evidence on the effect of length of work-fare on the welfare of the beneficiaries. It is obvious that the longer the length of tenure, better the impact of the project. But the trade-off between the length of the tenure and the coverage poses daunting challenge for the resource constrained government. Stretching the length of guaranteed work means less women will be covered. Note that the length of work-fare in REOPA was 24 months.

We asked the beneficiaries about the length of the programme in FGDs. Almost everybody thinks that it should be stretched up to 2 years. Their argument was that it took about a year to 'get on their feet' and they needed one more year to improve their situation. The first year was all about repaying debt and making some essential spending on food, clothing, housing, health, etc. **Therefore, the length of the tenure can be reconsidered for the scaled-up project.** It was also pointed out by the beneficiaries that the work-fare can be phased out gradually, for example, full-time work for the first 18 months and part-time works for the following 6 months when the beneficiaries will work for 2-3 days a week.

iii. Is the impact sustainable after SWAPNO?

The end-line survey was conducted right after the project closure. In previous sections we discussed the types of investment the beneficiaries made out of the compulsory savings they received at the end of employment. It is encouraging that most of them invested in productive income generating activities such as livestock, poultry, small businesses, etc. However, the returns of these IGAs are yet to materialize in most of the cases. Therefore, it is too premature to comment on the sustainability of the level of income which they used to earn during the project life. **We need another follow-up survey at least after one year to assess the sustainability of the interventions beyond the project.** The sustainability of the outcomes of the project after the project life should be a part of the monitoring tool of SWAPNO. Knowledge on what works and what does not remain incomplete if the long-term impact of the intervention is not assessed.

However, there are indications that the short-term impact of the project is likely to sustain, though the extent of sustainability can be debated. As we discussed, the first major indication is the amount and type of investment they made out of their wage income and mandatory saving. Second, the beneficiaries have learnt some basics of running a business and basic arithmetic. It has boosted their confidence in themselves, which is manifested in their discourse, body language and attitude. Third, their control over their assets as well as their mobility has

increased along with self-confidence, self-efficacy and aspiration. They now have a plan how to live their lives in the years to come. All these indicators indicate that the beneficiaries now aspire to live a better life and they will continue to do so in the absence of the project.

iii. Asset monitoring and early payment of bonus

Since the graduation bonus is paid at the end of project employment, the project staff, particularly the Union Workers, hardly have any time left to guide, coach and oversee the investment made by the beneficiaries. The bonus is given at the end of the 18-month tenure and most of the IGA activities start with this capital. Though the sustainability of the project outcome after the project critically depends on the success of the investment, the beneficiaries are left on their own to run their IGAs with little technical help and monitoring from the project.

For example, in case of cow-fattening, the beneficiaries need to be monitored very closely till the asset is sold. Cow-fattening requires technical knowledge which the five-day livelihood training may not be good enough to offer. It requires one-to-one monitoring. This type of investment is subject to various types of shocks such as diseases, price shock, etc. and the beneficiaries should know how to cope with these shocks under the supervision of project staff.

One way to solve this asset monitoring problem is to disburse graduation bonus in the middle of the project life, for example, after six months. All livelihood training can be completed by the time the bonus is disbursed. In this case, their graduation bonus will be greater than the amount saved in first six months. That is, the beneficiaries will borrow from their own future income. If the investment is made right after six months of the start of the project, the project staff will have ample time to monitor the asset. The incubation period of the business will get long enough time to experiment and redesign the investment options if required. The beneficiaries will also earn their labour income and investment income at the same time. It has the potential to generate greater momentum in their income earning opportunities through higher savings and investment.

v. Business Models: Beneficiaries should know in advance what would happen after the project

What the project design lacks is the projection of the situation of the beneficiaries in the absence of the project. These projections must include several scenarios of investment with possible stream of income for the following one or two years. That is, carefully crafted business models should be part of the project design – if a beneficiary earns Taka 100 from the project, saves Taka 40 during the project period and invest in option X, it will bring Taka Y in the next one year. These types of exercise will give beneficiaries the confidence that they can maintain a standard of living after the project similar to what they used to maintain during the project life. **These business models should be the part of the training programme.** If a woman earns Taka 2000 per month before enrolling in SWAPNO and Taka 5000 per month during the project, business models should specify how she would earn at least Taka 3000 in the post-SWAPNO period.

vi. Union Worker: The catalyst of change

Union Worker is a great innovation of this project. Each programme union has a Union Worker employed by the partner NGOs. The FGDs reveal that the follow-up visit by the union workers was very helpful in learning the materials taught in the training programme. This initiative can be scaled up and formalized in the project design. The one-to-one meetings of the union workers with the beneficiaries on investment decisions and running an IGA was found to be very effective, though it was practiced for a very short period of time before the project cycle ended. Union Workers were also involved in monitoring the public works. FGDs with the Union Workers reveal that this type of monitoring requires full-time workers. Since they are multi-tasking, it compromises the quality of monitoring and other works. Better monitoring mechanism should be in place to oversee the public works, as FGDs suggested. In this light, **it is recommended to increase the number of union workers per union.** Monetary incentive of a union worker was also argued to be low and does not commensurate with the work load it demands.

vii. Life-skill and livelihood trainings: Require revisiting

We have discussed the training programme and its effectiveness in previous chapter. It highlights that while all the trainings were reportedly useful to the beneficiaries, its sole dependency on class room teaching is debatable. That is, the participants acknowledge and understand the usefulness of the training but may not know how to use them effectively in their real lives. **Class-room training can thus be complemented by hands-on training on various business options** such as cow-fattening, poultry, wood-work, etc. Teaching materials on social issues such as gender, human rights, etc. can be made more interesting and communicable with the help of internet and multimedia. These types of contents are readily available in the internet and can be used with very low cost. Union Digital Centre (UDC) can play an important role in delivering such materials.

While conducting KII with the trainers of courses, shortage of the skilled manpower in the union to conduct the specialized courses such as on cattle, goat and poultry rearing was identified as a major obstacle for effective learning. In some cases, union workers also taught such courses. While they may be good at teaching, courses on technical issues should be taught by technical personnel. Sub-district level public and NGO officials with specialization can be identified and invited to teach these courses.

The content of the courses can be re-assessed by an education expert before scaling up the project in order to better serve the beneficiaries. We believe there are scopes to merge and squeeze some of the overlapping issues on gender, human rights and leadership development.

viii. Involvement of Union Digital Centre (UDC)

All Union Parishad offices of Bangladesh house a UDC which is a public-private partnership enterprise offering a host of public services such issuing birth certificates, delivering social security benefits, etc. We discussed with a couple of UDCs regarding its scope of involvement in SWAPNO. It is found that these UDCs are under-utilized and **UDCs can be involved in several stages of project implementation, from beneficiary selection to project monitoring.**