



Japan  
Fund for  
Poverty  
Reduction

## **IMPACT EVALUATION STUDY**

---

**Advancing Economic Opportunities of Women and Girls in Bhutan**

**Sonam Wangyel Wang (PhD)  
HAPPINESS CONSULTING GROUP**

## **ACKNOWLEDGEMENT**

Many thanks to all the staff members of NCWC, Project Implementing Agencies, and Local Government Officers, for all the assistance and information provided for the completion of this Impact Evaluation Study. Very special thanks to Dasho Phintsho Choeden- hon'ble Director General of NCWC, Mr. Nidup Tshering - Project Manager, Project Financial Officer, and the Project Gender Specialist who made special efforts to provide additional information requested.

Sonam Wangyel Wang (PhD)  
Happiness Consulting Group  
Thimphu Bhutan.

## TABLE OF CONTENTS

<b>ABBREVIATIONS.....</b>	<b>iv</b>
<b>EXECUTIVE SUMMARY.....</b>	<b>v</b>
<b>I. INTRODUCTION.....</b>	<b>1</b>
<b>A. Project Background.....</b>	<b>1</b>
<b>B. Project Objectives and Expected Outputs.....</b>	<b>2</b>
<b>C. Objectives and Scope of the Impact Evaluation Study.....</b>	<b>3</b>
<b>II. METHODOLOGY AND STUDY DESIGN.....</b>	<b>4</b>
<b>A. Conceptual Framework.....</b>	<b>4</b>
<b>B. Impact Evaluation Methods.....</b>	<b>7</b>
<b>C. Identification of Counterfactuals.....</b>	<b>9</b>
<b>D. Estimation Approach.....</b>	<b>10</b>
<b>E. Sampling Strategy.....</b>	<b>12</b>
<b>F. Data Collection.....</b>	<b>13</b>
<b>G. Data Analysis.....</b>	<b>14</b>
<b>III. IMPACT STUDY FINDINGS.....</b>	<b>15</b>
<b>A. Self Help Group.....</b>	<b>15</b>
<b>B. Village Skills Development Program.....</b>	<b>26</b>
<b>C. Apprenticeship Training Program.....</b>	<b>33</b>
<b>IV. PERFORMANCE OF THE PROJECT.....</b>	<b>37</b>
<b>A. Relevance.....</b>	<b>37</b>
<b>B. Effectiveness.....</b>	<b>37</b>
<b>C. Efficiency.....</b>	<b>41</b>
<b>D. Sustainability.....</b>	<b>45</b>
<b>E. Impacts.....</b>	<b>45</b>
<b>V. SUMMARY, LESSONS, AND RECOMMENDATIONS.....</b>	<b>47</b>
<b>A. Summary.....</b>	<b>47</b>
<b>B. Lessons and Issues.....</b>	<b>49</b>
<b>C. Recommendations.....</b>	<b>51</b>
<b>VI. REFERENCE.....</b>	<b>53</b>
<b>Appendix 1. Evaluation Design Matrix.....</b>	<b>54</b>
<b>Appendix 2. Estimation Results.....</b>	<b>58</b>
<b>Appendix 3. Assessment of Expenditure.....</b>	<b>61</b>

## ABBREVIATION

AEOWGP	-	Advancing Economic Opportunities of Women and Girls Project
ATP	-	Apprenticeship Training Program
ADB	-	Asian Development Bank
BAOWE	-	Bhutan Association of Women Entrepreneurs
CGI	-	Corrugated Galvanized Iron
DID	-	Difference in Difference
EA	-	Executing Agency
GNHC	-	Gross National Happiness Commission
HH	-	House Holds
IA	-	Implementing Agency
JFPR	-	Japan Fund for Poverty Reduction
MoEA	-	Ministry of Economic Affairs
MoF	-	Ministry of Finance
MoLHR	-	Ministry of Labor and Human Resources
MoU	-	Memorandum of Understanding
PMU	-	Project Management Unit
NCB	-	National Competitive Bidding
NCWC	-	National Commission for Women and Children
NGOs	-	Non Governmental Organizations
NPAG	-	National Plan of Action for Gender
OLS	-	Ordinal Logistic Regression
PMU	-	Project Management Unit
PSC	-	Project Steering Committee
RAA	-	Royal Audit Authority
RGoB	-	Royal Government of Bhutan
SHGs	-	Self Help Groups
SPSS	-	Statistical Package for Social Science
TF	-	Tarayana Foundation
ToR	-	Terms of Reference
UN	-	United Nations
UNDP	-	United Nations Development Program
VSDP	-	Village Skills Development Program

## **EXECUTIVE SUMMARY**

### **Project Background**

The Government of Bhutan identified gender as a priority area, which has directly translated into both the 10<sup>th</sup> and the 11<sup>th</sup> five-year plans requiring each sector to “effectively mainstream gender issues into their policies and programs”. The National Plan of Action for Gender (NPAG) 2008-2013 recognizes women’s economic disadvantage and has identified economic development (with focus on employment) as one of the seven critical areas for action. Accordingly, many sectors across the Government, development partners, and civil societies have refocused their programs to include gender issues. With funding from the Japan Fund for Poverty Reduction (JFPR) through the Asian Development Bank (ADB), the Advancing Economic Opportunities of Women and Girls Project (AEOWGP) was designed to contribute towards improving the economic status of vulnerable women and girls in selected urban and rural areas by enhancing their capacity to access livelihood (including microenterprise) and employment opportunities.

### **Project Objectives and Expected outputs**

The project’s main objective was to contribute towards improving the economic status of vulnerable women and girls in selected urban and rural areas by enhancing their capacity to access livelihood (including microenterprise) and employment opportunities.

The project aimed to achieve its objectives through the delivery of the following outputs:

- i) Increased capacity of government and non-governmental organizations responsible for the economic empowerment of women;
- ii) Increased economic benefits to women and girls resulting from improved capacity of Self Help Groups (SHGs) to sustain livelihood and microenterprise activities and to access business development services, and increased employment opportunities for girls in target districts.

## **Objectives of the Impact Evaluation Study**

As specified in the ToR the objectives of the Impact Evaluation are:

- i) To assess the distributional impacts and overall project's impacts from Advancing Economic Opportunities of Women and Girls.
- ii) To seek to achieve the objectives by directly addressing to answer the key questions that are given in the ToR and testing the hypotheses that have been handed over by the PMU.

The main conclusions of the Impact Evaluation are presented below:

### **Relevance**

The project is in direct alignment to the Royal Government of Bhutan's developmental priority to mainstream gender across all sectors and specifically responded to the National Plan of Action on Gender (NPAG). Internationally, the project is in direct alignment with ADB's country partnership Strategy and also addressed the implementation of the UN's millennium development goals to Promote Gender Equality and Empower Women.

### **Effectiveness**

The effectiveness of the projects is rated highly satisfactory. The project purposes and objectives have been satisfactorily achieved with significant progress made against planned outputs, outcomes, income, and women empowerment. The planned outputs, and activities, effectively contributed to the achievement of the project's original goals and targets.

The project design and implementation approach provided a sustainable mechanism for poverty alleviation through concerted capacity building for beneficiaries, community group formation, and increased agricultural productivity.

### **Efficiency**

The outputs and the major thematic activities carried out were technically adequate, reasonably implemented within the time frame agreed in the annual work plans, project proposal or as amended by the project management during the program management

meetings and costs were reasonable for the achievement of the project purpose.

The funds allocated for the project were spent in line with the agreed financial plans but not within the original time frame due to the delay in finalizing the Implementer contracts with NGOs by the ADB. Consequently, the project was extended by 6 more months till December 2014. Overall, at the time of this study the project has achieved 87%, indicating excellent disbursement progress. The funds were efficiently managed using existing ADB and government mechanisms.

### **Sustainability**

The project design and implementation approach provided a sustainable mechanism for interventions to enhance income and empower women and girls through concerted capacity building and formation of SHGs. Positive response and good ownership of the project by the Government, its agencies, institutions, and civil societies as well as outcomes indicate that the approaches used were institutionally and technically appropriate for Bhutan. These approaches include, NCWC- the Government agency for women participated as the Executing Agency, involvement of civil societies, and Ministry of Labor and Human Resources (MoLHR) as Implementing Agencies, capacity building of implementing agencies, SHG members, and other program participants through VSDP and ATP, reinforcement of Gender Focal Persons, etc.

### **Impacts**

The project has generated outstanding impacts that are quantifiable, statistically significant, and positive, and positive improvements in the social welfare and quality of life for the beneficiaries as noted below:

- The project has build capacities through training of SHG members, 334 VSDP participants, and 829 ATP participants, and established 62 SHGs;
- Increased economic income for participating members of (SHG and VSDP) with higher incomes for women thereby positively contributing towards achievement of the project objective to advance economic empowerment of women;

- Reduced differences in the income between male and females post project for ATP participants;
- A more diverse income source from SHG and trainings thereby reducing risks and improving securities;
- Skills development reduced ratio of expenditure on skilled labor declined by about four and half times;
- 129 men and 251 female who participated in the ATP were employed
- Household infrastructure and living standards of the beneficiaries have undergone marked improvement;
- Improved household abilities to protect families from threats and vulnerabilities as well as feed them;
- A more aware population with increased number of women taking independent decisions as well as holding positions in the society due enhanced confidence and capacities;
- The project especially through its SHG intervention has strengthened community cooperation establishing and reinforcing institutional capacity.

### **Overall project rating**

The overall project rating is *highly satisfactory*

### **Lessons and Issues**

- **A rigorous monitoring and evaluation** of project including mid-term review, terminal evaluation, and impact evaluation informs policy makers.
- **Country ownership** is critical for the project success. Participatory process in the formulation of the project interventions is a pre-requisite to not only assuring project success but also its continuity (sustainability).
- **Coordinated partnership** between government (NCWC and MoLHR), NGO (Tarayana Foundation and BAOWE), and local communities is more effective in optimizing efficiency and ownership contributing to project success.

- **Involvement of well established local NGO** makes project cost effective due to value additions from various sources, which is a direct advantage of involving local government, and well-established civil societies as implementers with strong community ownership.
- **Application of adaptive management strategies** is a key to achieving project goals and objectives. For instance the project presented a high standard of initiative, adaptability, and innovation by quickly shifting to new needs based interventions when the original interventions failed to work (as in Zhemgang where originally identified SHG enterprises were replaced by new ones) either due to new developments or people priorities or time constraints.
- **Documentation and sharing of knowledge** is important for dynamic learning process to scale up best practices.
- **SHGs and skills training** are a very effective tool for enhancing income and empowering communities especially women and girls as well as reducing expenditure on hire of skilled labor.
- **NGO selected interventions** bring bigger increase in income compared to those who self selected.
- **Proximity to motorable roads** is key to improving incomes as OLS regression estimates both for the SHG and VSDP reflect that as distance from the road increases by a percent, the gains in income falls.
- **A good baseline data** adds high value to evaluating impact of development interventions.

## **Recommendations**

- Strengthen monitoring and evaluation systems and implement them strictly. An evaluation of impact after 2 years could yield more mature results.
- PMU must consolidate the technical and experiential gains made through the project and ensure that they are used for strengthening future projects as well as share with relevant stakeholders.
- Future project may consider releasing funds as agreed in the annual work plan in advance of implementation of activities.
- NGOs must continue to help assist farmers to gain skills to identify project interventions.
- ADB should continue to support NCWC in further assisting the present interventions to mature and scaling up the best practices.
- As there is a direct co-relation between increased income and easy access to markets, future projects must prioritize improving access to markets.
- AEWGPP has made significant difference in the lives of the poor especially women and girls and as such the ADB should continue to support NCWC in further assisting the present interventions to mature and scale up. Given the overwhelming benefits from these projects especially from SHG, it is recommended that the Government mobilize its own resources for scaling up similar projects across the country.

## I. INTRODUCTION

### A. Project Background

1. Although, remarkable progress have been made to ensure gender equality at all levels, at the cross roads of 21<sup>st</sup> Century, it is ironic that gender equality remains a daunting problem across the world. Given that almost 50% of the world population are women, a male dominated world is certainly deprived off of creativity and experiences that the other half (50% women) hold when it comes to addressing critical issues of public policy, poverty, war and peace, etc. Realizing this, many nations around the world have embraced programs to ensure gender equality and encourage women participation in political and socio-economic development. One effective strategy identified to promote gender equality is to empower women economically.

**Table 1. Project Profile:**

<i>Project Title:</i>	Advancing Economic Opportunities of Women and Girls
<i>Executing Agency:</i>	National Commission for Women and Children
<i>Implementing Agencies</i>	Ministry of Labor and Human Resources (MoLHR) Bhutan Association of Women Entrepreneurs (BAOWE) Tarayana Foundation (TF)
<i>Key Contact Person</i>	Nidup Tshering, Consulting Project Manager
<i>Project Duration</i>	May 9, 2011-December 31, 2014
<i>Budget</i> <i>ADB Grant (JFPR)</i>	US\$ 1,145,790

2. In its effort to mitigate and adapt to existing and emerging gender gaps, the Government and the people of Bhutan have embarked on some aggressive initiatives at policy, institutional, and program levels. This has directly translated into both the 10<sup>th</sup> and the 11<sup>th</sup> Five Year Plans requiring sectors to “effectively mainstream gender issues into their policies and programs”. The National Plan of Action for Gender (NPAG) 2008-2013 recognizes women’s economic disadvantage and has identified economic development (with focus on employment) as one of the seven critical areas for action.

Accordingly, many sectors across the Government, development partners, and civil societies have refocused their programs to include gender issues. With funding from the Japan fund for Poverty Reduction (JFPR) through Asian Development Bank (ADB), the Advancing Economic Opportunities of Women and Girls Project (AEOGWP) was designed to contribute towards improving the economic status of vulnerable women and girls in selected urban and rural areas by enhancing their capacity to access livelihood (including microenterprise) and employment opportunities (Table 1).

## **B. Project Objectives and Expected Outputs**

3. The project's main objective was to contribute towards improving the economic status of vulnerable women and girls in selected urban and rural areas by enhancing their capacity to access livelihood (including microenterprise) and employment opportunities.

4. The project aimed to achieve its objectives through the delivery of the following outputs:

- i. Increased capacity of government and non-governmental organizations responsible for the economic empowerment of women;
- ii. Increased economic benefits to women and girls resulting from improved capacity of Self Help Groups (SHGs) to sustain livelihood and microenterprise activities and to access business development services, and increased employment opportunities for girls in target districts.

5. To achieve expected outputs and objectives, the project supported direct interventions aimed to establish Self Help Groups (SHGs) with sustainable economic activities in select districts, and enhance employability of young people (especially girls) through improved, and marketable skills. A total of 62 SHGs have been formed, 334 young people (233 female and 101 males) trained in Village Skills Development Program (VSDP), and 409 (280 female and 129 males) in Apprenticeship Training Program, of the total, all men and 251 female were employed (ATP: Note: additional 420 (263 female and 157 men of which 110 men and 233 female were employed were trained from RGoB funding).

### **C. Objectives and Scope of the Impact Evaluation Study**

6. As specified in the ToR the objectives of the Impact Evaluation are:

- i) To assess the distributional impacts and overall projects impacts from Advancing Economic Opportunities of Women and Girls.
- ii) To seek to achieve the objectives by directly addressing to answer the key questions that are given in the ToR and testing the hypotheses that have been handed over by the PMU.

7. Impact evaluation is an assessment of how the intervention being evaluated affects outcomes, whether these effects are intended or unintended. Given that the project was expected to end in December 31, 2014, and VSDP training is underway in Trashigang Dzongkhag, the evaluator pointed out that the project is not matured enough for a full-blown impact evaluation. The study therefore focused on ascertaining early impacts and/or expected future impacts and evaluate the performance of the project using relevance, effectiveness, efficiency, and sustainability based on document reviews, analysis of available data, and interviews with key stakeholders and beneficiaries. This was carried out through a thorough assessment of achievements, challenges, and the contributions of the project towards the overall objectives of the project. This should be achieved by bringing together results from the completed activities/outputs, which have been reported, as well as evidence from other reports and publications including Quarterly Progress Reports, Grant Implementation Manual, Financial and Project Management, and interviews with beneficiaries, project implementing agencies, and physical verification from the field visit.

8. While determining the economic and social impact on the households, the evaluations aimed to answer questions related to “What is the causal effect of forming Self Help Group (SHG) and capacity building on Economic Empowerment of Women and Employment Opportunities for Girls?” Relevant lessons and emerging recommendations were derived based on empirical findings for improving design and implementation performance of similar future projects.

## **II. METHODOLOGY AND STUDY DESIGN**

### **A. Conceptual Framework**

9. The conceptual framework for this study (Table 2) was guided by a review of relevant literature, a program theory that linked project inputs, outputs, outcomes, and impacts, and the impact evaluation framework for component C (as provided by the PMU). The project on Advancing Economic Opportunities of Women and Girls (AEOWP) is hypothesized to have an impact primarily on the economic and social welfare of the trainees and SHG members. Accordingly, the study focused on the impact of establishing Self Help Groups (SHGs) and skills training in variety of trades on two major areas (i) economic welfare and (ii) Social benefits. The model envisages that due to improved income generating opportunities through SHGs and trainings in various trade results in higher household incomes, increased employment, and lower expenditures on hire of skilled labor. The study examined the overall impact of participation in the training (VSDP and ATP) and being members of SHGs on income increase, and evaluated how variations in different original characteristics (e.g. gender, age, educational level, proximity to urban centers, high family income, land ownership, etc) impacted the success of the programs. Further exploration was also carried out on what types of training (in-terms of different trades) and SHG membership (in terms of choice of economic activities, and whether or not the activities were self chosen or given by the Implementing Agencies) led to larger increases in income and employment.

10. Social benefits from economic opportunities and associated spin off impacts include enhanced food security, increased purchasing power, physical assets, gender empowerment, education, health, etc. Aside from household characteristics discussed above, non project inputs also included village level characteristics including; availability of school, hospital, roads, transportation, distance from nearest market, etc.

**Table 2.** Logic Models to Evaluate the Overall Impact of Advancing Economic Opportunities of Women and Girls Project (AEOWGP) in Bhutan

<b>Project Inputs or Activities</b>	<b>Outputs</b>	<b>Outcomes</b>	<b>Impacts</b>
<b>Project resources</b> ADB/JFPR grant TA National Expertise	Self Help Groups/microenterprises  Skills training on different trades and business or employment	Improved opportunities for income generating activities  Reduced hire of skilled labor  Increased HH Income Increased Expenditure Increased Savings Better living conditions Improved skills	<i>A. Economic growth and poverty reduction</i> (i) Higher household income (ii) Increased employment (iii) Lower expenditure on hire of skills  (v) Improved savings (vi) Physical assets
<b>Non project factors</b> Household and individual characteristics  (i) Age, sex, education of household head (ii) Age, sex, education of individual (iii) Expenditure and wealth indicators (iv) Socioeconomic status (v) Housing Characteristics Village characteristics (i) Availability of health facilities (ii) Availability of education facilities (iii) Distance from district headquarters (iv) Distance from nearest motorable road		Improved roofing, walls, toilets More leisure time Improved convenience Improved capabilities for earning livelihoods and security of households	<i>B. Social:</i> (i) More food secured (ii) Balanced gender roles (Reduction in the cases of violence against Women) (iii) Balanced control over resources (iii) Increased time for social interactions (iv) Gender based violence reduced

**11. Evaluation criteria and their description:** Mainstream impact evaluation will be based on evaluation of the project achievements made against planned objectives, outputs, activities, and indicators as set out in the project proposal and log frame. Elements or sub-criteria may include but not limited to: Timeliness: how the grants met the schedule

and implementation timetable cited in the strategic plan, project document or the annual work plans; achievement of results/objectives/outputs: the extent to which the strategic plans and projects environmental, social, physical, human and natural goals were achieved against the set targets; completion of activities; plan budget; early impact created by the interventions; sustainability; stakeholder participation; monitoring and evaluation.

**Table 3.** Description of evaluation criteria

<b>Criteria</b>	<b>Description</b>
Relevance	Extent to which the project initiative and its intended outputs are consistent with national and local policies and the needs of intended beneficiaries. Extent to which the initiative responds to priorities of NCWC, ADB, JFPR.
Effectiveness	Measure of the extent to which the project intended results (outputs or outcomes) have been achieved.
Efficiency	Measure of how economically resources or inputs (such as funds, expertise, and time) are converted into results.
Sustainability	Extent to which the benefits of the project will continue after external assistance ceases.
Results/ Impacts	What has changed in human development and people's wellbeing that are brought about by the project interventions, directly or indirectly, intended or unintended.

**Table 4.** Evaluation ratings

<b>Rating</b>	<b>Qualitative Rating</b>	<b>Program Achievement %</b>
1	Highly Satisfactory	80-100
2	Satisfactory	65 – 79
3	Marginally Satisfactory	50 – 64
4	Unsatisfactory	Less than 49

## **B. Impact Evaluation Methods**

12. This evaluation used a mixed method approach to allow for triangulation of information from a variety of sources. Bramberger, et al. (2006) and White (2008) also argued that mixed method evaluation combines the detailed insights and holistic understanding obtained from qualitative research with the ability to generalize to a wider population offered by quantitative data collection. Mixed methods help strengthen validity, fine-tune sampling and instrumentation, extend the coverage of findings, conduct multi-level analysis, and generate new and diverse insights.

**13. Impact Evaluation Design.** An impact evaluation assesses changes in the economic welfare and social benefits of individuals, households, communities or firms that can be attributed to a particular project, program, or policy. The central impact evaluation question is what would have happened to those receiving the interventions (training/SHG) if they had not in fact received the project. Since we cannot observe this group both with and without the intervention, the key challenge that plagues evaluations is how to identify a counterfactual – that is, a group that is as similar as possible (in observable and unobservable dimensions) to those receiving the intervention. This comparison allows for the establishment of definitive causality – attributing observed changes in social and economic welfare to the project interventions, while removing confounding factors.

14. A review of impact evaluation methods revealed three popular methods of evaluation design; i) experimental or randomized, ii) quasi-experimental, and iii) non-experimental. Detailed description of these methods is described in a review of recent developments in Impact Evaluation (ADB 2011) and elsewhere (Carvalho, S. and White, H., 2004).

15. Of the three methods, experimental or randomized method is considered the most robust as it guards against selection bias as confounding effects are nullified by random assignment. However, randomized method require adequate measures introduced at the project design, which is often not the case with many development assistance projects. Randomized methods are also difficult to implement in infrastructure projects (due to high fixed and sunk costs) and in ex-post evaluations.

16. Quasi-experimental method is the best alternative when a treatment cannot be randomized for ethical or practical reasons. This design involves selecting a counterfactual, which is exactly like the treatment group (matching) in all ways except one: their exposure to the project being evaluated. The goal in the end is to be able to attribute differences in outcomes between the group of participants and the control/comparison group to the project (and not to other factors). Differences in Difference (DID) method, Propensity Score Matching (PSM) based on regression are some of the most popular quasi-experimental design used to evaluate project effects where randomization is not possible.

17. DID detect changes that occurred over time between the treatment and the control group following a two-step method. This method works when data are available for the time periods before and after the project for both treatment and control groups. First step is to derive the difference of the mean of an outcome variable before the project implementation from the mean after implementation of the project for treatment group and the control group respectively. The next step is to calculate the difference between the two differences. DID's validity rests on the assumption that the selection bias is time invariant or in other words, the absence of treatment changes in the outcomes in the treated group and control group would have been the same.

18. Direct matching or PSM is a more recent method for estimating causal effect. This procedure mimics the randomized experiment result by matching treatment households/villages to one or comparison households/villages with similar observed characteristics. This method calculates for the treated and comparison samples, the probability of treatment (participation in SHG, VSDP, ATP) as a function of household or village characteristics from a logit or probit model. This probability of adopting project interventions, calculated for households both with and without treatment is called the propensity score.

19. As this study was conducted ex-post, with no reliable baseline data, the impact study was designed to fulfill the requirements of DID and PSM. A comprehensive household and village level surveys were designed to capture information about several conditioning

variables that potentially affect the outcomes and participation, thereby reducing potential sources of bias. The household level questions were also designed to collect information from pre and post project periods to allow the use of DID estimation. Same survey was administered to both the treatment and control groups, as a result of which outcomes are measured identically.

### **C. Identification of Counterfactuals**

20. One of the main goals of impact evaluation is viewed as an effort to construct a counterfactual against which the treatment group is compared. The idea is to select a group that is exactly like the treatment group in all ways except their exposure to the program interventions being evaluated, in this case, participation in SHGs, and VSDP.

21. The most preferred and robust method in impact evaluation is a randomized experiment, where both the treatment and control groups are randomly selected. Since the study was conducted post project we could not employ a randomized experiment. In addition, there is no existing baseline data. Only sparse details on the characteristics of individuals to be surveyed were available. In particular, there was no inclusion of education level, number of workers within the household, and total income of the household that may come from outside agriculture and the selected skills. These are important characteristics that can help identify a household's poverty status as well as their vulnerability to poverty when comparing the characteristics over time. Hence the study used one time survey, employing a quasi-experimental design to estimate the causal effects of the program on the hypotheses.

22. As matched samples produce superiority estimation of impacts as compared to unmatched samples (Pattanayak, et al, 2007) the study team prepared a list of matching comparison villages against the list of treatment villages. After controlling for village characteristics including agro-ecological zone, social characteristics (education) distance from the road head, etc. comparison villages were selected randomly. Using the village census records and following the ToR, the survey team randomly interviewed 707 SHG members, 244 VSDP trainee, and 210 ATP trainees.

#### **D. Estimation Approach**

23. Estimation methodology is driven by the nature of the dependent variable and the treatment variable. Past studies (Wooldridge, 2002; Kondo, T, 2007) recommended that it is useful to discuss the nature of the treatment variables and the outcome variables before determining the estimation methods.

**24. Outcome variable.** Outcome variables considered in this study included: (i) basic household welfare measures including income, expenditures, savings, food and non food expenditures; (ii) household enterprises and employment; and (iii) household assets such as land, livestock, farm equipment, household appliances, and physical assets. Some of these variables are continuous (such as per capita income, expenditure, savings, food and non-food expenditures) while others are truncated (such as value of household assets) and count (number of enterprises, numbers employed). Estimation methods will need to be sensitive to the requirements of these different types of dependent variables.

**25. Treatment variables.** Project implemented 3 interventions or treatments namely; (i) Shelf Help Group (SHG), Village Skills Development Program (VSDP), and (iii) Apprentice Training Program (ATP). Treatment variables include: (i) participation in SHG or trainings; (ii) types of trades; (iii) choice of economic activities; and (iv) whether the economic activities were self identified or by implementing agencies.

**26. Other independent variables** included (i) household characteristics such as age, gender, wealth, educational levels, household size, and (ii) village characteristics such as availability of health and education facilities, distance from nearest motorable road, market, etc.

**27. Estimation Methods.** The impacts of participation in SHG, VSDP, and ATP on different outcomes were estimated by three methods. First, simple difference-in-means impacts were estimated by comparing households in treatment and control groups without applying matching.

28. This method does not control for individual household and village level characteristics that may affect the outcome of interest. The mean differences only show an association between two variables and do not imply causation, and as such findings will be used where causation is not required or as a comparison to the results from the other methods.

29. The second method adopted for this study is the difference in difference (DID) method, which is presented in a regression framework as:

$$Y_{ij} = F(\beta_1 X_{ij} + \beta_2 V_j + \beta_3 M_{ij} + \beta_4 T_{ij} + \varepsilon_{ij})$$

where:

$Y_{ij}$  = household outcome of interest

$X_{ij}$  = household characteristics

$V_j$  = village characteristics

$M_{ij}$  = membership dummy; 1 if participant in existing and expansion areas; 0 otherwise

$T_{ij}$  = treatment variable; 1 (or >0) if participant in treatment area<sup>3</sup>

The  $F()$  function can be linear or non-linear depending on the nature of the dependent variable of interest. The coefficient of  $T_{ij}$  ( $\beta_4$ ) measures the impact of project interventions on household outcomes  $Y_{ij}$ .

30. The average treatment effects under this method are obtained in a two-step differencing procedure. The first step is to calculate the difference of the mean of an outcome variable before the implementation of the project from the mean after the implementation of the program for the treatment group and untreated comparison group, respectively. Second step is to calculate the difference between the two differences. While the present study lacks proper baseline, the data collection tools have been developed to generate information from time periods before the project started and today, thus fulfilling the requirements of DID.

31. Thirdly, ordinal logistic regression was used to obtain full analysis of the data wherever, possible.

### E. Sampling Strategy

32. A mix of purposive and probability sampling approaches were deployed to design the sampling frame as specified in the ToR and evaluation framework. The objective as specified in the evaluation framework is to statistically test for differences of increase in income for each of the 3 treatment groups: (1) a group of 334 individuals who have completed VSDP; (2) a group of 410 who have completed ATP; and (3) a group of 1011 who are members of the SHGs. To achieve this objective, a sample sizes for various groups are described in Table 5.

**Table 5.** Showing total number of respondents surveyed with breakdown for each treatment and control groups (n). N is the total number of original beneficiaries

	<i>Self Help Group</i>		<i>VSDP</i>		<i>ATP</i>	<i>Total</i>
	<i>Treatment</i>	<i>Control</i>	<i>Treatment</i>	<i>Control</i>	<i>Treatment</i>	
<i>n</i>	348	359	103	141	210	1161
<i>N</i>	993		334		409	1736
<i>%</i>	35.0		30.8		51.34	66.87
<i>F:M</i>	70:30		69:31		70:30	70:30

33. A stratified randomized sampling was deployed to randomly select representative respondents (representing target communities, demographic, gender, education, and socio-economic conditions) from treatment groups (SHG, ATP, and VSDP) in target districts and control group for SHG and VSDP from non-target communities.

34. Villages, households, and individuals that participated in project interventions constituted the population (N) for the treatment group. A total of 1795 individuals (Table 5) from five Dzongkhags (of Pemagatshel, Samtse, Thimphu, Trashigang, and Zhemgang) participated in one of the three project interventions.

35. Total number of sampled village is in proportion to its relative share in the total number of SHG and VSDP villages. In Dzongkhags that have a large number of program

participation in SHG, VSDP, more households were surveyed; conversely, a smaller number of households were surveyed in Dzogkhags that have fewer SHG members and VSDP trainees. Likewise, households in each village were sampled for the study based on their share in the total number of households participating in the project interventions. For VSDP, number of samples was also proportional to the number of total participants from each trade. For ATP, individual were sampled in proportion to their share in the total number of participants for each trade and between urban and rural. In addition, pre-determined male and female ratio (Table 5) was used to guide the number of male and female respondents from respective groups.

## **F. Data Collection**

36. Data collection method in particular used a mixed method (to allow for triangulation of information from variety of sources) which included, (i) desktop review of project documents; (ii) primary data collection (through household survey, respondent survey, key informant interviews with beneficiaries, interactions with village officials, and staff from PMU and Implementing Agencies).

37. After thorough review of the project documents, its objectives, expected outputs, activities, ToR, Impact Evaluation Framework, and using the theory of change (used for impact evaluations), the key questions, and hypotheses given under the scope of the assignment, the survey team developed the Evaluation Design Matrix (Appendix 1) with key questions to guide the overall methodology including the development of interview questions for SHG, VSDP, ATP, village leaders, and Implementing Agencies. The questions were distributed to the PMU and Implementing Agencies for their comments before getting endorsed at the Inception presentation.

### ***Survey team and Pretesting***

38. As specified in the ToR, 20 survey enumerators with prior skills and preferably possessing college degrees were hired in consultation with Project Management Unit (PMU). Two-day training was conducted to familiarize enumerators with project background, objectives, purpose of this study, and to orient their skills to this study. A

pre-testing of the questions was carried out to both revalidate the questions as well as harmonize interview methods. The best surveyors were then appointed as supervisor for each district and made responsible for monitoring the data collection as well as for addressing the concerns immediately in the field.

39. Both quantitative and qualitative data were collected for the study. Quantitative data was collected administering surveys at village and household levels for treatment groups (SHG, VSDP, ATP) and control groups (SHG and VSDP). The survey collected information on various outcome indicators pertaining to benefits of being a SHG member, participant of VSDP and ATP. Broader questions were also administered to village heads, training firms, and Implementing Agencies including PMU.

40. The interview focused on ascertaining changes (positive or negative) at all levels of the results chain including ripple effects on families, households, communities, and institutional and environmental systems. Specifically, it measured direct and indirect (as well as intentional and unintentional changes) changes in quality of life, income and expenditure patterns, infrastructure, and human capacities, resulting from the project interventions. In addition information were also collected to assess the relevance, efficiency, quality of the project, sustainability, as well as to ascertain perceptions, facts and figures on the impacts of project, and the opportunities.

### **G. Data Analysis**

41. To ensure accuracy in data entry, the study adopted a double entry management system using SPSS. Five trained encoders (including one statistical officer) encoded the field data. The statistical officer further crosschecked the database, before it was subjected to appropriate statistical tests. Information generated from surveys was analyzed using statistical tool (SPSS) and Excel. The impacts of SHG, VSDP, and ATP on different outcomes were estimated by three methods discussed under estimation procedures section.

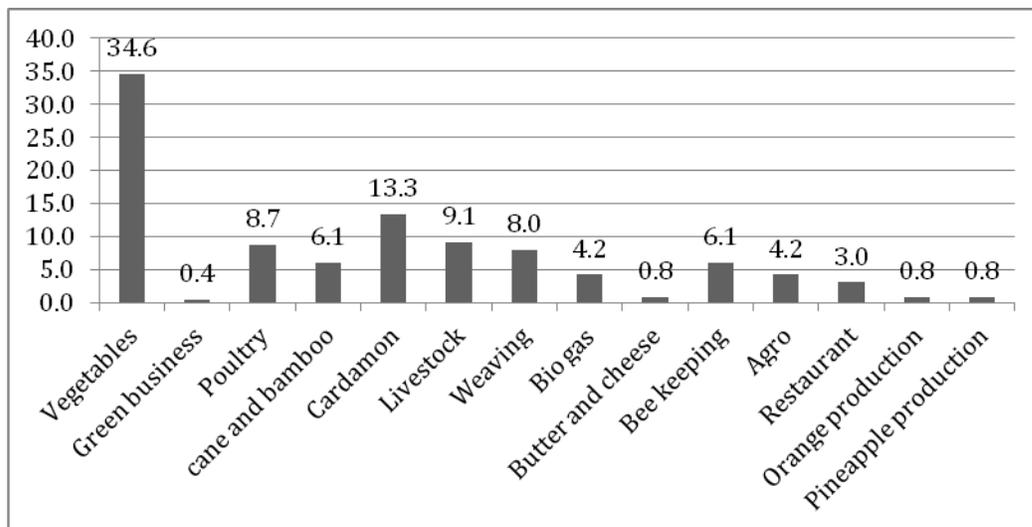
### III. IMPACT STUDY FINDINGS

42. Impact assessment of three intervention programs (SHG, VSDP and ATP) is made on the basis of two main criteria- economic welfare and social benefits. Different variables are analyzed using difference in the means, difference in difference, and Ordinal Logistic Regression (OLS), binary logistical regression model, and other appropriate statistical tests. The outcomes are discussed under the following sections, while the detailed results are presented in Appendix 2.

#### A. Self Help Group

##### Demographic Characteristics

43. The details of the demographic characteristic of the respondents are presented Appendix 2. The average distance of SHGs households from the nearest market is 38.9 km, from nearest motorable road is 5.6 km, nearest schools 4.2 km, and nearest health facility 5.3 km. Average house hold size is 4.5, average age is 38 years, and mean years of schooling is 7. From Figure 1, vegetable is the most popular enterprise with the largest share of the SHG members at over 34%, followed by cardamom (13.3%), and livestock (9.1%).



**Figure 1.** Income generating activities of SHGs (% share)

## **Impact on Economic Welfare**

**44. Income:** Economic Welfare can be best represented by level of income, expenditure, and saving. The study hypothesized that people who receive training and became members of SHGs will experience larger increase in income than those who have not received training. Taking log value of change in income during project period as dependent variable, the results of OLS regression estimates suggests that those who received trainings and joined SHGs have indeed experienced higher increase in the income than the control group. Table 6 show that estimates are statistically significant at 90% confidence level. Treatment causes the income to increase by about 15%. It is also encouraging to note that female experienced 12% higher increase in income than the male (4.75 as compared to 4.73 for male) indicating early impacts on advancing economic empowerment of women. However, the results suggest that the difference in the increase in the income of female and male that joined SHGs is not statistically significant. This is expected as the project has just completed its implementation giving very little room for the interventions to mature into statistically significant impacts.

45. A deeper dive revealed that the SHGs that were farm-based experienced higher increase in income (Nu. 94173) than the non-farm based income (Nu.76008). Group wise results reflect that the control group experienced relatively higher increase in farm based income than the treatment group. This indicates that the treatment group is less dependent on farm-based activities for additional income due to additional skills developed through training. OLS regression estimates, using dummy occupation (farm=0, non-farm=1) as explanatory variable reflects that shift from farm to non-farm activity cause income to fall by 24.8%. This could be attributed to the fact that farmers are new to these non-farm activities/enterprises which are also in their infant stage and just starting to generate income. The evaluator would like to point out that this estimate is statistically significant, and as such introduction of non-farm based enterprises for farmers must be carried out based on thorough feasibility assessment with adequate technical and financial assistance until the non-farm activities starts to take off.

46. Activity wise distribution of income reflects that the share of agriculture and livestock in total income has declined for both the control and treatment groups. The fall is much sharper for the treatment group. For the treatment group, the share of income from SHG based activities has increased from 5.1% to 14.4%. Control group gets a large fraction of its income (41%) from other business and trade as compared to the treatment group (20.7%). Income from varied sources is more balanced for the treatment group and this helps to reduce their risk perception.

**47. Expenditure:** Allocation pattern of consumption expenditure is shown in the tables in Appendix 2. From Table 6, OLS regression estimates suggest change in the consumption expenditure is higher for the treatment group.

48. From the consumption and expenditure patterns as detailed in Appendix 2, it is also clear that the treatment group spend more than the control group. Further analysis using difference in difference analysis supports this finding and attributes it to higher increase in income for the treatment group. Pre-project spending pattern reflects that there was no major difference in the average annual expenditure between the two group-treatment (Nu.157374) and control (Nu. 143280). After the project, the difference has increased with the treatment group spending more (Nu 249227) than the control group (Nu. 207410).

**Table 6.** Impact of treatment on log income, expenditure and saving

Variable	Constant	$\beta_1$	t	Sig.	SE
Log Income	4.527	0.149	2.014	0.044	0.076***
Expenditure	23166.78	158.418	0.045	0.964	3524.73
Savings Yes=1	(21.203)	18.531	0	1	

Source: Survey 2014, Negative values are shown in parenthesis

49. The ratio of total expenditure to total income (average propensity to consume) declines steeply with the increase in income. For the bottom income SHG group the ratio is about 4412 and for the highest income group it is 19.67. It is not yet clear that how

such excess expenditure is financed, whilst 25% of the lower income group members have reported an increase in saving.

**50. Savings:** About 63% of the SHG treatment group respondents reported that their savings have increased due to project intervention (Table 6). The treatment group has experienced increase in income and consequently it has a positive impact on savings. Binary Logistic regression estimates suggest that impact of treatment on savings is statistically insignificant.

51. It was hypothesized that the mode of selection of the interventions also plays a significant role in determining the impact of intervention. SHGs that identified and chose economic activities themselves will have higher income than whose activities were chosen by NGOs. Hypothesis was made that those who were selected by NGOs experienced higher increase in income than those who self-selected the SHGs activities. Although not statistically significant, regression output implies that income increase for those who self-selected the treatment experienced smaller increase (about 9% less) in income than those who were selected by NGOs.

**Table 7.** Impact of household and village characteristics on income

Variable	Constant	$\beta_1$	t	sig.	SE
How economic activity was chosen	4.740	(0.091)	(.902)	0.368	0.1
Log income of the dummy gender of trainees below 25 years of age	4.577	(0.574)	(1.140)	0.265	0.504
Education level of the treatment Group.	4.667	0.008	.276	.784	0.030
Distance of the household from the motorable road	4.755	(0.031)	(1.195)	0.237	0.026

Source: Survey 2014, Negative values are shown in parenthesis

52. Further, the hypothesis that male trainees below the age of 25 will have higher income increase and greater socio-economic welfare improvements than female trainees

is proven wrong (Table 7). Gender-based difference in the change in the income of trainees below 25 years of age is not found to be significant for SHG based interventions. OLS regression estimates suggest that SHG male experience 57% less gain in income as compared to their female counterparts. Higher income increase for women is another outstanding achievement of the project to achieve its goal in Enhancing Economic Opportunities for Women.

53. Level of education of the members of SHGs also tends to influence income gains because it helps to enhance their skills and capacities. OLS regression estimates prove that such impact is statistically insignificant for the SHG based intervention measures. However, the estimates also show that additional year of education helps to raise income by 0.8% for SHG, exhibiting the potential for a significant positive impact as the project benefits mature. OLS regression estimate suggest that average gains in the income of non-farmers is about 67.3% more. Given that non-farmers are better educated and reinforced the finding that additional education will lead to more gains. On the contrary, for the SHG, farmer have fared significantly better ( $P < 0.005$ ) than non-farmers by almost 25% higher incomes.

54. Access to infrastructure is an important determinant of the ability of people to benefit from the economic opportunities. In this context, it is hypothesized that SHGs that are located near the roads will have higher sales and income. OLS regression estimates for the SHG reflect that as distance from the road increases by a percent, the gains in income fall. The findings although are statistically not significant the trend is in clear agreement with what was hypothesized, indicating that proximity to motorable roads is key to improving income.

55. The ability of the people in a village to benefit from SHGs also depends on the synergies that are created by other SHGs in a village. Larger number of SHGs in a village would translate into greater economic gains to the people. It is hypothesized that villages with higher number of trainees and SHG members will have higher socio economic welfare and welfare improvement than villages with less number of trainees and SHG

members. OLS regression estimates reflect that increase in the numbers of SHGs and trainees in a village causes income gains to expand by almost 4.5% (Table 8).

**Table 8.** Impact of number of trainees/SHG members on the log income

<b>Dependent Variable</b>	<b>Constant</b>	<b><math>\beta_1</math></b>	<b>t</b>	<b>sig.</b>	<b>SE</b>
Number of trainees/SHGs in a village (SHG)	4.507	0.044	1.945	0.39	0.004

Source: Survey 2014, Negative values are shown in parenthesis

**56. Impact on the effectiveness of training programs:** Participants rated the impact of training programs positively (Table 9). 54.9% of the SHG trainees reflected that trainings were excellent and that it helped them better manage their enterprises.

**Table 9.** Effectiveness of training programs

<b>Ratings</b>	<b>SHG</b>
Excellent	54.9
Good	44.8
Poor	0.3

Source: Survey 2014, Negative vales are shown in parenthesis

**57. Impact on poverty rate:** Poverty rate for SHG has steeply declined from about 84% to 51.6% during the project period for both the treatment and control groups (Table 10). The poverty rate is calculated using BLSS 2012 criteria-Nu. 1704.8 for post project period and BLSS 2007 criteria- Nu.1095 for the pre project period.

**Table 10.** Impact of SHG on poverty rate

<b>Groups</b>	<b>SHG</b>	
	<b>Pre project %</b>	<b>Post Project %</b>
Treatment	84	51.6
Control	84.3	51.6

Source: Survey 2014, Negative values are shown in parenthesis

## Impact on Social Welfare

**58. Asset Ownership:** Land is still the most prized asset in Bhutan, and OLS regression estimates suggest that with treatment the size of land owned increases by 107% for the SHG and the findings are statistically significant (Table 11). Further assessment of land use patterns reflect that treatment group rented out larger fraction of their land for shared cropping (85% of their land holding) while, the control group rented out only 35% of their land holdings. This finding can be attributed to additional opportunities for non-farm income that the project must have generated for the treatment group. Likerts scale shows an overall improvement in household infrastructure for both the treatment and control group with treatment group displaying better improvement.

**Table 11.** Impact of treatment on the size of land owned

<b>Dependent Variable</b>	<b>Constant</b>	<b><math>\beta_1</math></b>	<b>sig.</b>
Land owned (SHG)	3.784	1.072	0.005

Source: Survey 2014, Negative values are shown in parenthesis

**59. Housing** standard has improved significantly for the SHG households. Share of cemented and stone houses has increased sharply from less than 6% in the pre project period to 35% in the post project period. Share of mud houses has correspondingly declined from 68.4% to 30% during the given period. The share of bamboo and wood house has also increased from 26% to 35%. Improvement in the quality of houses is reflective of greater welfare. Similarly, the roofing of the houses has also improved during the project period. In the post project period the share of CGI has increased to 70% from the pre project period share of 22%. Correspondingly, the share of bamboo and other low quality material has declined.

**60.** Further analysis on the impact of income on type of housing reflects that higher income tends to have positive impact on the quality of house owned. Share of mud house and bamboo and wood house declines with the increase in income from second income group onwards (Table 12). Correspondingly, the share of cemented and stone house

increases with the increase in income. For the lowest income group the share of cemented house is only 11.5% and rises to 50% for the highest income group.

**Table 12.** Impact of income on type of housing

House type	Income Group (Nu)						
	Less than 5000	5001-10000	10001-25000	25001-50000	50001-100000	100001-500000	more than 500000
Mud house	19.2	60.0	35.9	32.9	31.8	29.7	25.2
Bamboo and wood house	69.2	20.0	42.6	42.4	37.3	33.5	24.6
Cemented and stone house	11.5	20.0	21.5	24.7	30.9	36.8	50.2

Source: Survey 2014, Negative values are shown in parenthesis

**61. Ability to protect from threats/vulnerabilities:** Ability of a person to protect himself/ herself from threats and vulnerabilities is likely to increase with income. The survey data tends to support this hypothesis. Difference in the means of control and treatment group for SHGs reflect that treatment groups have greater score (Mean=2.25, Std.Dev=0.67) in terms of ability to protect themselves from threats than the control group (Mean=2.06, Std.Dev=0.69).

62. The rating given by different income groups increases as a person moves up on income scale, reaches the plateau for the income groups falling between 50,000 to 500,000 (at a mean perception score of 2.22). It declined for the highest income group. This may be due to how they see emerging opportunities. Further, comparison with changes in the savings reflects it does not have any correlation with it. It is more to do with their perception about their capability to use the emerging opportunities.

**63. Ability to feed your family:** Enhanced income and savings directly translated into increased ability of beneficiaries to feed their families. Difference in the means of control and treatment group for SHGs reflect that treatment groups have greater score

(Mean=2.85, Std.Dev=1.31) in terms of ability to feed their family the control group (Mean=2.0, Std.Dev.=1.73). The SHG category appears to be better placed than the VSDP group on this aspect. Although, VSDP has higher rating, the SHGs made more significant progress in enhancing their ability to feed their family.

**64. Impact on women empowerment:** The treatment has influenced more positivity in the outlook towards women. Almost 75% of the treatment group responded positively and stated that they would demand respect for women in public and fight for their rights. This percentage for the control group is only 64%. Binary Logistic regression estimates suggest that treatment tends to increase the probability of giving greater respect to women by 51.5% (S.E. 0.172, Df=1, P=0.003). SHG interventions have trained and sensitized a large number of women and men and added value to their understanding of the importance of gender and the need to eradicate gender based violence. Respondents both women and men have reported that trainings, awareness coupled with increased incomes especially by women have motivated them to advocate gender equality. This motivation has translated into reduced gender based and domestic violence.

**Table 13.** Impact of income group on women right

Response	Income group (Nu)						
	Less than 5000	5001-10000	10001-25000	25001-50000	50001-100000	100001-500000	more than 500000
No	34.8	44.4	47.8	42.0	32.4	21.5	55.6
Yes	65.2	55.6	52.2	58.0	67.6	78.5	44.4

Source: Survey 2014, Negative values are shown in parenthesis

65. Table 13 shows some interesting variations in the impact of income on the perception of the people on women's right. Poorest income group tends to have better outlook towards women's rights and with the upward movement to the income group, in the initial stages, there is negative effect on the positive outlook. From the middle-income

group onwards the positivity improves, as almost 79% people in the second highest income group tend to have positive attitude. For the highest income group it steeply falls to 44.5%. This trend is confounding and could be cultural.

**66. Decision making:** 70.8% of the women who participated in SHG reflected that their ability to make independent decision has strengthened and 10.4% conveyed that it has strengthened highly. Women respondents reported full or some control over how to use their income and saving. Less male have reflected similar experience. Quite paradoxically, less percentage of women (53%) is able make decisions to use opportunities as compared to male (69.2%).

**67. Community positions.** SHG training has significantly affected their ability to proactively participate in the community affairs. 19.5% of the villagers who received SHG trainings hold positions in their communities as compared to only 5.3% of those villagers who did not receive SHG training. Of those holding positions 9.2% are SHG female. Binary logistic regression estimate suggest that SHG treatment tends to increase the chances of a person to occupy position of power in the community by over 100%. (S.E. 0.278, Df=1, P=.000). Treatment SHG female have 4 times more propensity (15.2%) to hold community positions than their control group counterparts (3.7%). With time, it is projected that more women will hold community positions as they have latent potential.

**Table 14.** Impact of income on community positions

Response	Income group (Nu)						
	Less than 5000	5001- 10000	10001- 25000	25001- 50000	50001- 100000	100001- 500000	more than 500000
No	91%	89%	87%	86%	81%	92%	100%
Yes	9%	11%	13%	14%	19%	8%	0%

Source: Survey 2014, Negative values are shown in parenthesis

68. Table 14 suggests that with the increase in income, the participation of the people in community life tends to increase steadily but for the highest income group it declines

very steeply. In fact the highest income group does not hold any position of power in the community. Participation in community leadership level rises from 9% for the lowest income group to 19% for the third highest income group. Increased income or economic empowerment allows the people to take more active part in community life and take up leadership role. For richer people, probably, the opportunity cost of active participation in community life is much higher. Occupation does not make major difference to the ability of a person to participate in community life and hold position of power. Farmers and others have equal share in the community leadership position. It is evident that it is not occupation but the income that significantly influence the ability of a person to take up leadership role.

**69. Social welfare perception:** About 75% of the treatment group felt that the SHG trainings have helped enhance their ability to earn more. About half of them believed that their current abilities are high and 22% believed that their abilities are moderately high. It is evident that the intervention has positive impact on welfare perception the beneficiaries.

70. The SHG respondents conveyed that five years ago their main problems were- limited marketing support, inadequacy and lack of easy access to infrastructure (mainly, roads and electricity), low income, and limited access to finance. At present, most of them believe that there has been improvement on all the fronts.

71. Overall, the project has impacted positively on empowering women. Preceding findings show that our women and girls are more confident post project with higher number of them making independent decisions as well as hold important positions within the society.

## **B. Village Skills Development Program**

### Demographic characteristics of households

72. The average distance of VSDP recipient villages from the nearest market is 27.3 km, from nearest motorable road is 4.5 km, nearest schools 4 km, and nearest health facility 3.3 km. Average house hold size is 4.45, average age is 32 years, and mean years of schooling is 8. Figure 2 show that tailoring is the most sought after trade followed by repair of electrical appliances with embroidery coming up.

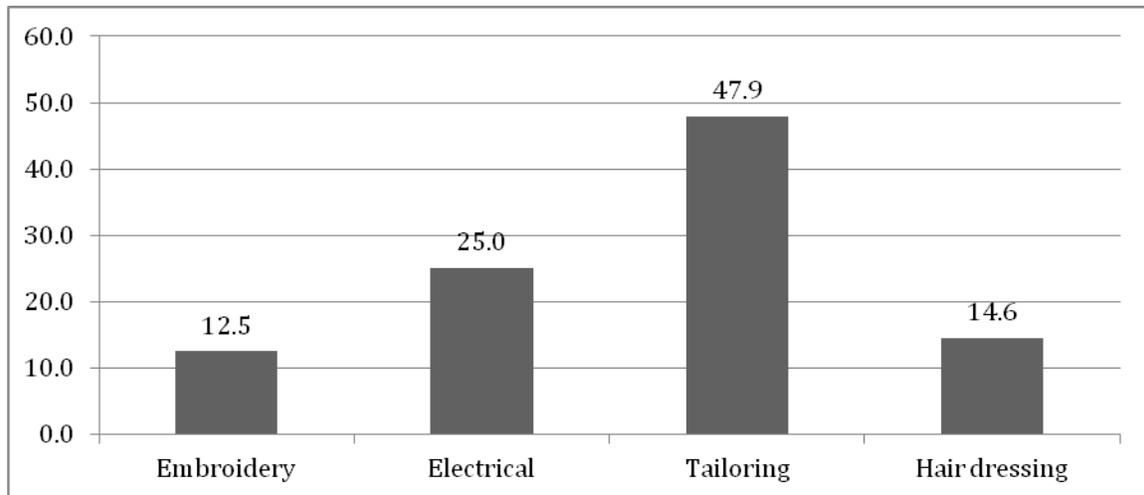


Figure 2. Percentage share in VSDP employment

### Impact on economic welfare

73. **Income:** OLS regression estimates suggest that the treatment caused the income to fall by about 2.5%, but the estimates are not significant. Such confounding negative impact of intervention on the income could be attributed to the skills just being acquired and put into implementation. OLS regression estimates also suggest that treatment male have experienced 13% higher incomes than the treatment female, although, the estimates are not significant (Table 15). This indicates that men are probably more prepared to take up new trades.

74. During VSDP project period, people experienced greater increase in income from non-farm activities than from the farm-based activities. In comparison to SHG, VSDP experienced much smaller economic benefits measured in terms of greater income. For VSDP, interesting difference is observed in the pattern of change between treatment and

control groups. Treatment group experienced greater rise in non-farm income (Nu. 4070) as compared to farm-based income (Nu.2266). Control group experienced greater rise in farm-based income (Nu.1387) than the non-farm income (Nu.590). The greater rise in non-farm income for the treatment group is due to additional skills acquired by the members of this group, which created new opportunities for them outside the farm sector.

**Table 15.** Impact of treatment on log income, and expenditure

Variable	Constant	$\beta_1$	t	Sig.	SE
Log Income	1.346	(0.025)	(0.105)	0.916	0.238
Expenditure	23766.83	4681.18	0.710	0.478	6594

Source: Survey 2014, Negative values are shown in parenthesis

75. Activity wise distribution of pre and post project distribution of income for VSDP treatment reflects that the share of tailoring, the total income increased from 6.6% to 59.1% during the project period. Share of hair dressing increased very marginally from 0 to 0.5%. Share of electrical work declined from 93.4% in the pre project to 40.5% in the post project period. Among VSDP activities tailoring is the most profitable venture. As compared to SHG, VSDP has less diversified sources of income. This aspect also explains the lower perception score of the VSDP in terms of ability to protect from threat.

**76. Expenditure:** Expenditure is expected to increase with increase in income. The mean expenditure of VSDP beneficiaries has increased to Nu. 4681.18 (Table 15). The ratio of total expenditure to total income (average propensity to consume) declines steeply with the increase in income. For VSDP, average propensity to consume is 47.3 for lowest income group and 1.8 for the highest income group.

77. OLS regression estimates for VSDP suggest that those who were selected to VSDP by NGOs experienced statistically significant greater gain in income than those who self-selected the VSDP. Income increase for those who self-selected the treatment would be 196% less than those who were chosen to VSDP by NGOs (Table 16). This difference is

probably due to the fact that NGOs select the beneficiaries on the basis of their better potential.

**Table 16.** Impact of household and village characteristics on income

<b>Variable</b>	<b>Constant</b>	<b><math>\beta_1</math></b>	<b>t</b>	<b>sig.</b>	<b>SE</b>
How economic activity was chosen	3.165	(1.966)	(2.247)	0.028	.875
Log Income of the dummy gender of trainees who are less than 25 years	1.663	(0.497)	(0.936)	0.354	0.532
Education level of the treatment group (VSDP)	2.620	(0.146)	(1.144)	0.260	0.127
Distance of the household from the motorable road	1.357	(0.009)	(0.372)	0.771	0.025
Number of trainees in a village (VSDP)	3.442	(0.032)	(0.877)	0.05	0.037

Source: Survey 2014, Negative values are shown in parenthesis

78. Further, the hypothesis that male trainees below the age of 25 will have higher income increase and greater socio-economic welfare improvements than female is also proven wrong (Table 16). Similar to the SHG results, gender-based difference in the change in the income of trainees below 25 years of age is not found to be significant for VSDP based interventions. OLS regression estimates suggest that VSDP male experience 49.7% less gain in income as compared to their female counterparts. Higher income increase for women is another outstanding achievement of the project to achieve its goal in enhancing economic opportunities for women.

79. Similar to the SHG findings level of education also tends to influence income gains. OLS regression estimates prove that while such impact is statistically insignificant, additional year of education helps to raise income by 14.6% for VSDP, exhibiting the potential for a significant positive impact as the project benefits mature. (Table 16) Further, non-farmers who participated in VSDP did well compared to their farmer friends who also participated in VSDP. OLS regression estimates suggest that average gains in the

income of non-farmers is about 67.3% more. Given that non-farmers are better educated, reconfirmed the finding that additional education will lead to more gains. On the contrary, for the SHG, farmer have fared significantly better ( $P < 0.005$ ) than non-farmers by almost 25% higher incomes. This suggests that VSDP are more suited to non-farmers and SHG to farmers. The treatment group also spent less time on farm-based activities probably implying increased production and/or off farm opportunities.

80. Proximity to motorable road has a direct and positive impact on the trainee’s ability to increase incomes. OLS regression estimates reflect that as distance from the road increases by a percent, the gains in income fall (Table 16). This finding along with that of SHG indicates that motorable access is a key to improved incomes.

81. The number of trainees and gain in income are indirectly correlated. Estimates reflect that as the number of trainee increases in the village, the gains in income falls by 3.2% (Table 16). This impact is probably due to a combination of greater competition among those who receive training against fixed size of the markets.

**82. Impact on the effectiveness of training programs:** Participants of the four programs rated the impact of training programs positively (Table 17). 96.3% VSDP trainees reflected that trainings were excellent, with 3.7% of good. As per the respondent, the programs were effective which is evidence from the findings with 0% for poor rating.

**Table 17.** Effectiveness of training programs

<b>Ratings</b>	<b>VSDP</b>
Excellent	96.3
Good	3.7
Poor	0

Source: Survey 2014, Negative values are shown in parenthesis

83. **Hire of skills:** The program also hypothesized that people who received the training will spend less on hire of skills as proportion to their income than villages who did not

receive training. Results show that the treatment has caused the ratio of expenditure on skilled labor to decline by about four and half times ( $\beta_1$  is  $-4.433$ ).

**84. Impact on poverty rate:** Compared to SHG, VSDP display a less steep decline in the poverty rate during project period (Table 18). Poverty rate for the treatment group declined from 87.3% in pre project period to 85% in the post project period. For the control group, poverty rate declined from 72.1% to 70.6% during the project period.

**Table 18.** Impact of VSDP on poverty rate

Groups	VSDP	
	Pre-project %	Post-Project %
Treatment	87.3	85
Control	72.1	70.6

Source: Survey 2014, Negative values are shown in parenthesis

### Impact on Social Welfare

**85. Asset ownership:** Land is a precious asset and a key to securing livelihoods and alleviating poverty. For VSDP respondents, such gains in land ownership (about 24%) are statistically insignificant (Table 19) but positive. Similarly, treatment group has reported higher rates of increase in other physical assets including housing, health facilities, transportation, etc.

**Table 19.** Impact of treatment on the size of land owned

Variable	Constant	$\beta_1$	sig.
Land owned (VSDP)	4.449	0.239	0.634

Source: Survey 2014, Negative values are shown in parenthesis

**86. Ability to protect from threats/vulnerabilities:** As with the findings for SHG, the VSDP intervention group also has reflected higher score (Mean=2.01, Std.Dev=0.65) in their abilities to protect themselves and their families from threats compared to non-

treatment groups (Mean=1.85, Std.Dev=0.66). Treatment group rates their abilities to protect from threats a little higher than the control group indicating the positive impact of the intervention. The rating for their abilities to protect from threats given by different income groups increase as a person moves up on income scale. The SHG category appears to be better placed than the VSDP group on this aspect.

**87. Ability to feed your family:** Increased income enhanced the abilities of the beneficiaries to improve their abilities to feed their families. Result shows that the VSDP intervention group has reflected higher score (Mean=3.33, Std.Dev=0.83) on this aspect than the control group (Mean=2.33, Std.Dev=0.52).

**88. Impact on women empowerment:** Decision-making is an indicator of empowerment. The VSDP program induced women to make independent decisions through capacity building, increased interaction, and awareness. 63.7% of the VSDP women reflected that their ability to make independent decision has strengthened and 8.8% conveyed that it has strengthened highly. Less male reflected similar perception showing early positive impacts of the treatment. Similar to SHG, less percentage of women (74.8%) reported that they are able make decisions to use opportunities as compared to male (87%). This could indicate that men are still more mobile, grabs new opportunities faster than women but the encouraging trend is that women are certainly catching up.

**89. Community positions:** Overall, 1.3% of VSDP female holds the position in the community. Further, 2.9% of treatment VSDP female holds positions in the community as compared to none in the control category. This indicates that the treatment has induced women to hold community positions and that with time there exists a lot of room for women to hold more positions in the community.

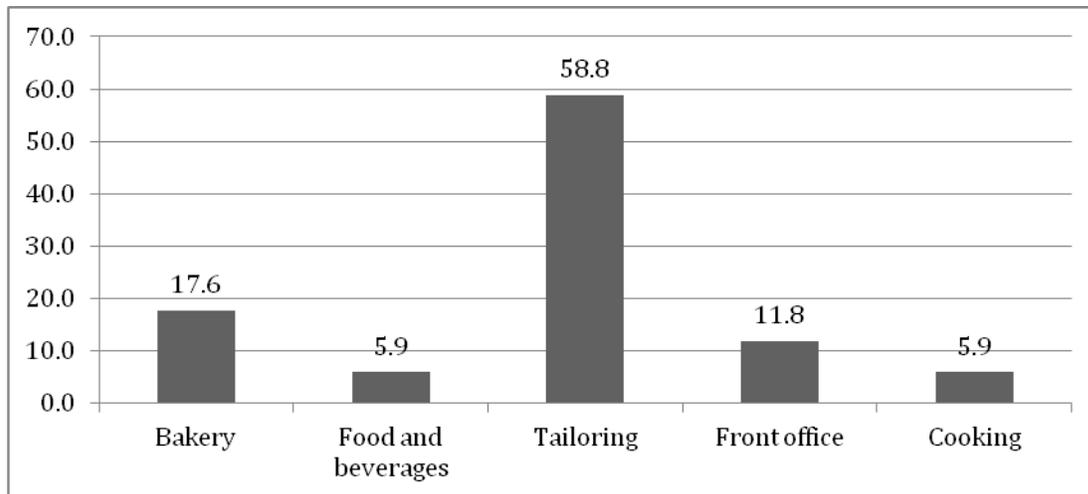
**90. Social welfare perception:** There is no doubt that the trainings have improved the social perception of the beneficiaries, with most of them taking a positive stand on life. Majority of the respondents agree that their social interactions have improved building trust amongst themselves and their sense of community, belonging, and support for each

other has undergone a significant improvement. As with the SHG and VSDP respondents conveyed that five years ago their main problems were- limited marketing support, inadequacy and lack of easy access to infrastructure (mainly, roads and electricity), low income and limited access to finance. At present, most of them believe that there has been improvement on all the fronts.

### **C. Apprenticeship Training Program (ATP)**

### Demographic Characteristics

91. The average distance of ATP recipient's place of residence from the nearest market is 4.3 km, from nearest motorable road is 1.5 km, nearest schools 2.3 km, and nearest health facility 3.1 km. Average house hold size is 2.9, average age is 23.7 years, and mean years of schooling is 11.5. Figure 3 also shows tailoring as top trade, followed by bakery.



**Figure 3.** Percentage share in ATP employment

92. ATP recipient are in most advantageous position due to their location and demographic characteristics. These villages are nearer to the town and other social infrastructure. The population is more educated, younger, and household size is smaller as compared to other villages. The dependency rate should definitely be lower in these villages. The SHG villages are in least advantageous situation indicating that more educated people who took advantage of ATP and VSDP are living nearer to urban centers.

### Impact on Economic Welfare

**93. Income:** ATP data was analyzed using difference in difference method on information from pre and post project periods. The results indicate a significant increase of 82% in the log income of the trainees from Nu.3,323 to Nu. 6,072 (Table 20). This high success rate is attributed to the high quality of training coupled with the commitment of training firms in finding employment for the ATP beneficiaries. While income of male trainees is found to be more than that of female trainees, the differences in their income

has declined during the project time, showing early impact of the project in achieving its goal of increasing income for women and girls. ATP fared far better than SHG and VSDP in its performance to achieve project goals and objectives.

**Table 20.** Impact on the mean in the income of ATP beneficiaries

<b>Gender</b>		<b>Pre project income (Nu)</b>	<b>Post project income (Nu)</b>
Male	Mean	5184.142	7535.714
	Std. Error of Mean	3590.621	2038.965
Female	Mean	2526.531	5445.421
	Std. Error of Mean	1607.677	1556.579
Total	Mean	3323.814	6072.509
	Std. Error of Mean	1555.102	1248.672

Source: Survey 2014, Negative values are shown in parenthesis.

94. For the ATP group, various training programs were designed and executed based on the interests of the trainees, which contributed to the overwhelming success of the program to increase income (Table 21). Of the various training program, tailoring generated the highest income (mean income of Nu. 29,777) probably due to higher demand indicating future potentials for additional tailoring business. This was followed by cooking (mean income of Nu.7,795), which aligns with the shortage of cooks especially in mid level restaurants in the country. The lowest income generated from bakery, food, and beverages. This finding can be attributed to lesser demand for baked products (traditionally Bhutanese people are not used to bakery products) and/or lack of demand for these skills due to demand saturation. 64.7% of the ATP trainees rated their business performances as highly satisfactory and 32.4% as satisfactory. One outstanding finding is that 94% of the ATP trainees reflected Thimphu as their preferred place for work with 5% reporting Phuentsholing and Paro. This may not necessarily help reverse rural migration but the truth is that better business opportunities are prevalent in these towns.

**Table 21.** Impact of training program on log income

<b>ATP</b>	<b>Mean</b>	<b>Std. Error of Mean</b>
Bakery	6000.00	.000

Food and beverages	6000.00	.000
Tailoring	29777.78	12103.463
Front office	6892.50	2392.500
Cooking	7795.00	.000

Source: Survey 2014, Negative values are shown in parenthesis

**95. Impact on the effectiveness of training programs:** Participants of the training programs rated the impact of training programs positively (Table 22). 58.4% of the ATP trainees agreed that the training was excellent for them, and 41.1% ATP trainees rated the training as good. ATP Training provided by training firms are rated marginally higher (2.4) than those provided by MoLHR (2.34). This can be attributed to the higher education level of ATP trainees and the effectiveness of the training firms.

**Table 22.** Effectiveness of training programs

<b>Ratings</b>	<b>ATP</b>
Excellent	58.4
Good	41.1
Poor	0.5

Source: Survey 2014, Negative values are shown in parenthesis

### **Impact on Social Welfare**

**96. Ability to protect from threats/vulnerabilities:** Ability of a person to protect himself/ herself from threats and vulnerabilities is expected to increase with the income. While the study finding tends to support this hypothesis, the increase in score is marginal (Mean=1.78, Std.Dev=0.77) with, as most believed it has almost remained the same. This is attributable to the fact that most ATP beneficiaries believe that they don't have control over their source of income or employment.

**97. Ability to feed your family:** Similar to the findings for abilities to protect from threats, the findings reflect a marginal increase in the abilities of the ATP beneficiaries to

feed their families (increased from 2.1 to 2.77 during the project period). The main reasons cited for this low score are that most ATP graduates have either just started their own enterprise or been employed and that they are just earning enough to look after themselves.

**98. Impact on women empowerment:** Results for ATP revealed it as the least effective program for empowering decision making abilities of women with only 47.6% of women reporting that their ability to make independent decisions has strengthened and 17.5% said it has strengthened highly. This percentage is lower for male. The findings indicate a positive trend in encouraging women to make independent decisions and that with trainings and capacity building women's' abilities to make independent decisions is no less than that of their male counterparts.

**99. Community positions.** Of the three interventions, ATP graduates ranked that highest in holding community positions with 9.8% of ATP female holding position in the community. Most ATP beneficiaries are high school graduates and their education levels coupled with ATP has enhanced their abilities and confidence in the community positions.

**100. Social welfare perception:** On the social welfare perception, the ATP respondents conveyed that five years ago their major problems were unemployment, dependency on others (women depended on male members) and financial problems. The problem of unemployment is changing for better but it still persists and remains an issue.

101. In Sum, the SHGs have fared better than other groups despite of relatively disadvantageous village and demographic characteristics. They have been able to translate the newly acquired capabilities through interventions into greater economic and social gains.

#### **IV. PERFORMANCE OF THE PROJECT**

##### **A. Relevance**

102. Realizing the existence of gender disparities with women on the disadvantaged side, Government of Bhutan has instituted the National Commission of Women and Children (NCWC) in 2004 to undertake initiatives related to women's equality and gender mainstreaming. This was followed by the revitalization of gender networks with Gender Focal Persons. Since then, a gender issue have been receiving increasing importance from the Government with the Kingdom of Bhutan's constitution featuring a strong commitment to eliminate discrimination against and exploitation of women. This is also strongly reflected in the Bhutan 2020 document and consequently translated into action through the National Plan of Action for Gender (NPAG), which was prepared, by the Gross National Happiness Commission (GNHC) and the NCWC in consultation with government Gender Focal Persons and relevant stakeholders. The 11<sup>th</sup> five-year plan also focuses on mainstreaming gender as a key element of strengthening governance. One of the Government's thrust areas in addressing gender equality is to empower women by providing them with economic opportunities and skills so that they become equal providers to the welfare of the household. The project addressed the implementation of these policies, action plans, and complemented the five-year plans of the Government.

103. Internationally, the project contributed towards the achievement of the Millennium Development Goal 3: Promote Gender equality and Empower Women, which Bhutan has also adopted. Further it fulfilled several international commitments Bhutan has made that have bearing on women empowerment. The project is also in alignment ADB country partnership Strategy.

## **B. Effectiveness**

104. Project effectiveness evaluates the extent to which the project's major objectives are understood and documented at the time of the evaluation were achieved at the project completion, or are expected to be achieved.

105. The projects have achieved all the expected outputs set out in the program document or amended in later work plans by the improvement of participatory practices introduced to local institutions and beneficiaries. The planned outputs, activities, and targets

effectively contributed to this achievement. The project effectiveness is rated as *highly satisfactory*.

### ***Program formulation***

106. The project design and implementation approach provided a sustainable mechanism for advancing economic opportunities to enhance income generation of women and girls through concerted capacity building for beneficiaries and formation of self help groups (SHGs). The very positive response to the project by the government (GNHC, NCWC, MoLHR), its agencies (local governments), institutions, and civil societies suggests that the approaches used are indeed institutionally and technically appropriate for Bhutan. These approaches included: i) the NCWC taking on the role of National Executing Agency; ii) Ministry of Labor and Human Resources, local governments, civil societies (BAOWE & TF), and target communities taking on the responsibility of implementing the project; iii) stakeholder involvement by various public and private agencies including beneficiary groups in adding value to the attainment of the project outcomes; and iv) very importantly necessary needs assessments such as quick baseline studies, and other pre-requisites were fulfilled allowing the project to optimize resources.

107. It is important to highlight the effectiveness of the several activities that the project executed to achieve the purpose of the project such as: trainings for capacity building of communities in micro-enterprises and different trades. The project effectiveness has also accrued from strengthened partnerships between the PMU, implementers, local governments, and various stakeholder organizations.

108. The overall approach or the project in terms of selection of target villages for implementing the interventions, relevance of interventions, identification of partners, and the interlinked structures of the project implementation are *highly satisfactory*.

### ***Primary stakeholder representation***

109. The program design ensured that primary stakeholders were well represented in the project formulation, design, and implementation. The project designer must be applauded

to have based their project formulation on the premise that village level participation in development planning as well as stewardship and implementation is key to the success of the interventions. Various self-help groups were a product of an extensive consultative process and the program achievements must be attributed to this process. It is important to mention here that the experience, outreach, and the trust of Tarayana and BAOWE played a key role in successful participation.

110. The presence of field officers especially from Tarayana Foundation has assured exhaustive consultation to identify feasible enterprises for the SHGs. In addition, their involvement also facilitated the involvement of beneficiaries and key experts from local agencies (Gewog extension officers) from project formulation, through baseline studies, indicated outstanding community participation at both the inception as well as implementation of the project.

111. The evaluation appreciates the difficulties and efforts expended in making the projects truly a participatory one and the important role taken up by the local governments and other implementing agencies.

112. The management of the project was kept simple so that local government and communities could have a larger role in making decisions on the activities implemented in their own communities. The evaluation would like to commend this highly decentralized thinking but to note that care should be taken so as not to dilute the strong need for a central coordinating body for effective coordination, monitoring, and evaluation purposes.

### ***Country ownership***

113. Country ownership of a project is a critical feature of any evaluation as it inevitably provides an indication of the future sustainability of the program. This program exhibits good government ownership as indicated by:

- The project's relevance to the Government's ongoing national efforts to promote gender parity and empower women especially in the poorest rural communities in

Bhutan;

- The Government through NCWC, MoLHR, and local governments has shown strong ownership and demonstrated visible interest and presence throughout the duration of the project and beyond;
- Key stakeholders and beneficiaries considered NCWC, BAOWE, Tarayana, and local governments as immense source of personal satisfaction and contribution, which is an indication of ownership by the stakeholders. The evaluation commends the very high level of ownership by the Government, Civil Societies, and communities and rates it as *highly satisfactory*.

***Planned resource and time span***

114. The planned time span for the project was appropriate and a total fund of US\$ 1,145,790 for this component of the project was adequate for the projects' results envisaged. Infact, the project have achieved a lot more for each dollar than expected due to value additions from various sources, which is a direct advantage of involving local government, and well established civil societies as implementers with strong community ownership. Given the delay in release of funds by almost a year, the implementing agencies must be commended for completing all the planned activities plus few additional interventions within the time frame. Availability of local experts such as forest, livestock, and agricultural extension agents allowed cost savings and contributed to increased efficiency of the projects. Involvement of community with cost sharing approaches further enhanced the value for money. An analysis of budget expenditures indicated that the project achieved a financial progress of over 87%, which is an outstanding achievement given the diversity of the interventions, extent, and the remoteness of the project sites.

An analysis of achievement against planned outputs shows outstanding progress (Table 23).

**Table 23 . Analysis of output achievements**

<b>Goals</b>	<b>Performance targets/indicators</b>	<b>Time line</b>	<b>Achievement</b>	<b>Achievement progress</b>
--------------	---------------------------------------	------------------	--------------------	-----------------------------

<b>Output 3: Enhanced capacity of women and girls and SHGs to sustain economic activities and find employment</b>				
3.1. Implementation of Apprenticeship Training Program	600 young people (90% women) trained from urban and rural areas. 90% of the ATP graduates employed in private sector (2010 baseline 60%)	To complete by 2 <sup>nd</sup> quarter 2014	A total of 829 young people trained (65.5% women) of which 409 trained under JFPR support (68.5% women) 46% employed by July 2013.	No of individuals trained: 138% (overall) with 68.4% women. For JFPR support
3.2. Village skills Development Program in Pema gatshel, Samtse, Zhemgang	360 young people (50% women) from Urban and Rural area trained in village skills development	To be completed by 15/4/2014	334 young people trained in VSDP	93% of the target trained with 65% women
3.3. Formation of SHGs and implementation of livelihood microenterprise	60 SHGs or 1200 individuals (90% women) engaged in microenterprises or other livelihood activities (Baseline 2010: 10 SHGs)		62 SHGs (with 993 individuals) established (83.7% women) of which 34 SHGs (54%) have started production	SHGs: 103% progress Individuals: 84% progress Women: 6% short to make 90%
3.4. Baseline socio-economic survey, resource assessment in Gewogs			Completed	100%

### **C. Efficiency**

115. The outputs and the major thematic activities carried out were technically adequate, reasonably implemented within the time frame agreed in the annual work plans, project proposal or as amended by the project management during the program management meetings and costs were reasonable for the achievement of the project purpose.

#### ***Implementation modalities and project management***

116. The project was executed by NCWC and jointly implemented by TF, BAOWE, MoLHR, and private training institutions (for ATP). The Project Management Unit headed by the Project Manager, Gender and Development Specialist, and a Project Finance Officer served as the secretariat to the Project Steering Committee (PSC), while

the implementation was decentralized to the Implementing Agencies. The Implementing Agencies also prepared and reported regularly on the progress to PMU.

117. NCWC as the Executing Agency signed the project documents and all project revisions with financial implications. The Implementing Agencies were responsible for implementing the project as per the approved Annual Work Plans and for achieving the results and were accountable for the delivery of the project outputs and efficient utilization of the project resources.

118. Local government nominated representatives and experts and the communities were represented by their SHG officials (such as chairperson) to support to oversee the overall management and implementation of the project on a day-to-day basis and for preparing and submitting reports.

119. Overall, the quality of implementation and execution is to be applauded. So much has been achieved with such a modest budget and a small, efficient team.

### ***Financial planning and cost effectiveness***

120. Although the project actually kicked off almost a year after it was approved money received was well spent and in agreed time span indicating excellent planning and efficient delivery. The financial planning and cost effectiveness has therefore been evaluated as *highly satisfactory*. The project is cost effective and generated good value for money for the country and development partners (Table 24). To assure quality of the interventions budgets were released in installments based on actual progress of the project activities as indicated in the physical and financial progresses. This avoided excess release of funds and kept the project tightly knit around its originally agreed activities. However, the evaluator would like to point out that this method also posed few logistical challenges as some of the procurement and field activities needed either pre or immediate expenditure of funds. To enhance efficiency and effectiveness, future projects may consider releasing allocated funds as per the work plan either on a quarterly or bi-annual basis depending on the physical and financial progress reports.

121. Successful financial planning stems from the fact that the interventions were finalized using a multi-stakeholder and consensual approach as indicated plans, project management documents, and some of the baseline information. High annual delivery levels confirm the effectiveness of financial planning.

**Table 24.** Performance ratio of the project

<b>Performance ratio</b>	<b>%</b>
Program ratio	87.37
Cost ratio	15.78
Disbursement ration	95.98

122. Required inputs including experts were appropriate in numbers, timing of dispatch, and specialization fields of knowledge. Inputs to facilitate effective implementation were also delivered on time allowing timely and cost effective delivery of outputs. The program procurements were implemented using standard procurement rules established and tested by the Government, and the implementing agencies, which are in consonance with the Government of Bhutan Procurement Rules. As such, average costs of the execution of activities and acquisition of materials and equipment for both the projects are in complete conformity with existing procedures and should therefore remain cost effective (Table 24).

123. Overall financial progress of the project is satisfactory with an average of 87% at the time of this study. This progress is highly satisfactory and the remaining funds are yet to be disbursed from ADB, which will raise the financial performance further. The program ratio (higher the ratio better the performance) indicated a good performance, although there is a lot of room for improvement. One such a strategy maybe to release the funds approved prior to implementation to the implementation agencies. Cost ratio, which measures how cost effective an intervention is in delivering or realizing the program objectives, is showing outstanding progress and the evaluator would like to

applaud the implementing agencies. The goal of an implementing agency is to reduce this ratio to become more cost effective.

124. Finally the disbursement ratio which tracks the actual release of fund to grantees in relation to estimated use of funds that appear in their approved grant proposal is also showing outstanding performance at over 95%. Assessment of individual projects revealed that projects were also implemented in a cost effective manner.

### ***Monitoring and Evaluation***

125. Adequate monitoring and reporting especially between the donor, Executing Agency, and the Implementing Agencies was carried out as evidenced by the physical and financial progress reports, ADB mission reports, as reported by field officers and respondents. These systems conformed to the reporting and accounting requirements of the project.

126. Monitoring was carried out at two levels, one at the field level by the implementing agencies and the PMU, and another at the management level mainly to ensure the quality and timely implementation of project activities. As evidenced from a variety of field reports including progress reports, at the field level, the field staff implemented and monitored the project on daily basis and reported to the Project officers at the Implementing Agencies, who in turn reported to the PMU. At the management level, the PMU monitored the project against outcomes, outputs, and indicators as outlined in the project logical framework. In general, the project management produced terminal report describing physical and financial achievements, which was made available during the evaluation and used in the evaluation.

127. Project Finance Officer kept good track record of the project budgets and expenditures. The Finance Officer also appraised the PM with the financial status of the projects on a quarterly basis and submitted the financial statements. However, there was no evidence of a mid-term review, which was required by the project document.

## **D. Sustainability**

128. The project design and implementation approach provided a sustainable mechanism for interventions to enhance income and empower women and girls through concerted capacity building and formation of SHGs. Positive response and good ownership of the project by the Government, its agencies, institutions, and civil societies as well as outcomes indicate that the approaches used were institutionally and technically appropriate for Bhutan. These approaches include, NCWC- the government agency for women participated as the Executing Agency, involvement of civil societies (who are the implementing agencies), and Ministry of Labor and Human Resources (MoLHR) as implementing agencies, capacity building of implementing Agencies, SHG members, and other program participants through VSDP and ATP, reinforcement of Gender Focal Persons, etc.

## **E. Impacts**

129. The project has generated outstanding impacts that are quantifiable, statistically significant, and positive improvements in the social welfare and quality of life for the beneficiaries:

- The project has build capacities through training of SHG members, 334 VSDP participants, and 409 ATP participants, and established 62 SHG.
- The project has increased the economic income for participating members of (SHG, VSDP, ATP) with higher incomes for women (SHG, VSDP) thereby positively contributing towards achievement of the project objective to advance economic empowerment of women.
- The project also reduced the differences in the income levels between male and females post project for ATP participants.
- Skills development has allowed diversification of income with treatment group showing higher income from non-farm activities. VSDP in particular economically benefitted the non-farmers more.

- Increase in the numbers of SHGs and trainees in a village caused income gains to expand by almost 4.5%.
- Project has caused the ratio of expenditure on skilled labor to decline by about four and half times.
- 129 men and 251 female who participated in the ATP were employed.
- Project led to renting out of farmlands probably resulting from increased productivity and other skilled enterprises.
- Likert's scale shows an overall improvement in household infrastructure for both the treatment and control group with treatment group displaying better improvement.
- Project improved the abilities to protect families from threats and vulnerabilities as well as feed them.
- The project had positive impact on the perception of communities regarding their welfare and respect for women as manifested in reduced gender based violence and full or increased authority over use of their income and saving.
- The project has significantly reduced poverty rates for the participating households.
- The project interventions have empowered and improved the confidence of women to take independent decisions as well as hold more positions within the community. Majority of the respondents agree that their social interactions have improved building trust amongst themselves and their sense of community, belonging, and support for each other has undergone a significant improvement.

## **V. SUMMARY, LESSONS, AND RECOMMENDATIONS**

### **A. Summary**

**130. Overall assessment.** The project on advancing economic opportunities of women and girls (AEOWP) has been rated as *highly satisfactory* based on relevance of design, effectiveness in implementation and achievement of outputs, efficiency, and sustainability. The grant from JFPR through ADB executed by NCWC and implemented by Tarayana Foundation, BAOWE, and MOLHR has helped set up 62 SHGs, and imparted VSDP to 334 participants, and ATP to 409 young people. These interventions have resulted in increased income of the beneficiaries leading to improved economic and social welfare. Although, the evaluator expressed concerns regarding very little time between the completion of project activities and impact evaluation, the study has generated outstanding impacts that are quantifiable, statistically significant, and positive improvements in the social welfare and quality of life for the beneficiaries.

131. Some of the key economic impacts include better income from farm and nonfarm activities, including SHGs (such as weaving, green business, dairy, etc) better employment, reduced expenditure on hire of skilled labor, reduced gender based violence and increased authority over control and use of resources especially their income. All respondents agree that problems related to limited marketing support, inadequacy and lack of easy access to infrastructure (mainly roads and electricity), low income, and limited access to finance that were prevalent five years ago are now getting alleviated. The SHGs group has fared better than other groups despite of relatively disadvantageous village and demographic characteristics. They have been able to translate the newly acquired capabilities through interventions into greater economic and social gains.

132. Conventional trends (hypothesis) that man will benefit more and earn more from project interventions were turned around with higher incomes for women. This is a very significant proof that the project is well underway in achieving its original goal of enhancing economic opportunities of women and girls.

133. The project also brought about good changes in the social welfare of women especially with increased number of women reporting improved abilities to make independent decisions and create new opportunities. Number of women holding social

positions have also increased with data showing growing potential among women to shoulder such responsibilities. In addition, social facilities like housing, health, education, and transportation have also been improved.

134. Given the current policy that prioritizes poverty alleviation for the poorest of the poor and the most vulnerable groups, which include women and girls, the impacts of the project, are likely to be sustainable. A key challenge would be the enhanced competition resulting from growing number of SHGs and skills in similar areas. Skills that are less in demand either due to over population of skills in one area or for cultural reasons are showing no improvement in income, signaling the need for future projects to take needs based assessment into serious consideration.

135. One outstanding finding is that 94% of the ATP trainees reflected Thimphu as their preferred place for work with 5% reporting Phuentsholing and Paro. This may not necessarily help reverse rural migration but the truth is that better business opportunities are prevalent in these towns.

136. The beneficiaries exhibit high level of ownership of the project interventions guaranteeing sustainability.

137. While there is a direct and positive relationship between proximity to motorable road and income, access to market remains a challenge especially for SHG members. The survey data suggest that SHG based intervention measures are much more effective in alleviating poverty than the VSDP based measures. SHGs are also found to be more effective than VSDP and ATP in developing abilities to create protection against threats.

## **B. Lessons and Issues**

**138. A rigorous monitoring and evaluation** of project including mid term review, terminal evaluation, and impact evaluation informs policy makers. It helps to identify

success and failures on a continuous basis, implement adaptive measures, and assure project success. A MTR is missing for this project, which could have added a lot value to the project as well as aid this impact evaluation.

**139. Country ownership** is critical for the project success. Participatory process in the formulation of the project interventions is a pre-requisite to not only assuring project success but also its continuity (sustainability). The success of this project anchors on strong ownership by the Government through NCWC and many other social policies requires strengthening of mainstreaming of women issues in developmental activities particularly in the local government plans with a dedicated Gender Focal Person at local levels.

**140. Coordinated partnership** between government (NCWC and MoLHR), NGO (Tarayana Foundation and BAOWE), and local communities is more effective in optimizing efficiency and ownership contributing to project success.

**141. Involvement of well-established local NGOs** make project cost effective due to value additions from various sources, which is a direct advantage of involving local government, and well-established civil societies as implementers with strong community ownership.

**142. Application of adaptive management strategies** is key to achieve project goals and objectives. For instance the project presented a high standard of initiative, adaptability, and innovation by quickly shifting to new needs based interventions when the original interventions failed to work (as in Zhemgang where originally identified SHG enterprises were replaced by new ones) either due to new developments or people priorities or time constraints.

**143. Documentation and sharing of knowledge** are important for dynamic learning process to scale up best practices. While projects achieved their goals and brought numerous positive impacts, there has been little attempt to document and/or share

findings from the field. The evaluation suspects this, as it is not specifically addressed in the project framework.

**144. SHGs and skills training** are a very effective tool for reducing poverty, enhancing income and empowering communities especially women and girls as well as reducing expenditure on hire of skilled labor. Their impacts get magnified when larger number of SHGs and trainees present in a community. VSDP and ATP are better suited to more educated and non-farmers as they did better compared to their farmer friends.

**145. NGO selected interventions** bring bigger increase in income compared to those who self selected. This is due to both the technical expertise and long standing experience of NGOs in assessing the needs and potentials of the farmers.

**146. Proximity to motorable roads** is key to improving incomes as OLS regression estimates both for the SHG and VSDP reflect that as distance from the road increases by a %, the gains in income falls.

**147. A good baseline data** adds high value to evaluating impact of development interventions. Evaluations become empirically more meaningful if good baseline data are available, as it will allow more credible comparison of project impacts. Lack of baseline data for this study forced the evaluator to resort to quasi-experimental method.

148. While the country overall poverty rate has dropped drastically to 13% in 2012, farmers in Bhutan's remote pockets still display extreme poverty.

149. VSDP has caused the income to fall demanding for such interventions to be based on comprehensive needs and risk assessment.

### **C. Recommendations**

150. A monitoring and evaluation framework must be agreed and incorporated in the project document, so that M&E becomes institutionalized and PMU must follow up on

these requirements stringently. The evaluator noted lose M&E in this project, with loss of information, which has created difficulties in evaluating impacts.

151. Evaluations tend to be murky when implementers drive the evaluation process. It is recommended that an independent evaluation expert/firm be contracted to carry out mid term and terminal evaluation. A mid term evaluation will catalyze a smooth implementation leading to outcomes. In particular it will clarify achievements and implementing processes, and examine whether the plans of the program are appropriate, focusing on efficiency, relevance, etc. These assessments by an independent consultant will assure credible and neutral assessment of program performances.

152. As the educated gained more from the skills training (VSDP and APT), future skills development in these areas may like to target people with some level of education.

153. Respondents also rated private firms as more effective in training programs as such may like to think about outsourcing the VSDP to private firms as well.

154. The project has generated a lot of knowledge and information from the field including numerous consultancy outputs. It is recommended that the PMU publish these important findings and share best practices with all relevant stakeholders through print media or on line.

155. Release of funds upon production of expenditure invoice has reduced excess disbursement from the ADB and associated re-appropriations. However, this method also posed few logistical challenges as some of the procurement and field activities needed either pre or immediate expenditure of funds. To enhance efficiency and effectiveness, future projects may consider releasing allocated funds as per the work plan either on a quarterly or bi-annual basis depending on the physical and financial progress reports.

156. Given that the NGOs selected interventions brought higher increase in income, there is a need to assist the poor in improving the selection of project interventions. However,

it is recommended that these skills be transferred to the farmers in the longer run through capacity buildings and on the hands experience.

157. While the project has made immense contributions towards changing attitudes, gender roles, and increased incomes thereby raising the overall living standards of the beneficiaries, there has not been much effort to quantify the increases in awareness, capacities, and how these are leading to impacts, as it was not within the project framework. Perhaps thinking outside the project framework for value addition and generating knowledge is encouraged, even when the project achieves its goals and outcomes. It is also recommended to promote the continuity on generating knowledge and share the experiences achieved through this project with other stakeholders.

158. To avoid unintended and negative impact on the beneficiaries, future project must conduct a comprehensive needs assessment to identify interventions.

159. All the findings show a strong correlation between income and social welfare benefits and proximity to roads for market access. Study also observed that increased production with limited access to market would incur loss especially for perishable products such as vegetables (which has the highest share of SHG). This could backfire and discourage farmers from taking up rural agriculture based enterprises as well as lose hope in similar government interventions. It is strongly recommended that future projects should support improving access to markets.

160. AEWGP has made significant difference in the lives of the poor especially women and girls and as such the ADB should continue to support NCWC in further assisting the present interventions to mature and scale up. Given the overwhelming benefits from these projects especially from SHG, it is recommended that the Government mobilize its own resources for scaling up similar projects across the country.

## **VI. REFERENCE**

- ADB (2011). A Review of Recent Developments in Impact Evaluation. Philippines.
- Bramberger, M., Rugh, J., and Marby, L. (2006). Mixed-Method Evaluation. Real World Evaluation: Working Under Budget, Time, Data, and Political Constraints: Chapter 13. Saga Publications. California
- Carvalho, S. and White, H. (2004). Theory based evaluation: The Case of Social Funds. American Journal of Evaluation, Vol. 25 (2).
- Kondo, T. (2007). Impact of Microfinance on Rural Households in the Philippines. Operations Department. ADB.
- Rauniyar, G. (2010). Asian Development Bank's Assistance for Rural Electrification in Bhutan – Does Electrification Improve the Quality of Rural Life? An Evaluation Study. ADB. Independent Evaluation Department.
- Rauniyar, G. (2009). Impact of Rural Water Supply and Sanitation in Punjab, Pakistan. Independent Evaluation Department. ADB.
- White, H. (2008). Of Probit and Participation: The Use of Mixed Methods in Quantitative Impact Evaluations. Network of Networks on Impact Evaluation Working Paper No. 6. World Bank, Washington, D.C.
- Wooldridge, J.M. (2002). Econometric Analysis of Cross Section and Penal Data. Cambridge, Massachusetts: Massachusetts Institute of Technology Press.
- Pattanayak, S.K., Poulos, C., Wendland, K.M., Patil, S.R., Yang, J., Kwok, R.K., and Gorey, C.G. (2007). Informing the Water and Sanitation Sector Policy: Case Study of an Impact Evaluation Study of Water, Sanitation, and Hygiene Interventions in Maharashtra, India. Research Triangle Institute Working Paper 06\_04. North Carolina.

## APPENDIX 1. IMPACT EVALUATION DESIGN MATRIX

Evaluation criteria questions	Indicators	Sources	Methodology
<b>Impact: Are there indicators that the project has contributed to, or enabled progress toward, improved economic status of vulnerable women and girls in selected urban and rural areas by enhancing their capacity to access livelihood (including micro enterprise) and employment opportunities. Would the same level of impacts been achieved under no interventions?</b>			
<ul style="list-style-type: none"> <li>• What are the intended and/or unintended positive and negative, long-term effects of the project on economic welfare and social benefits of the beneficiaries?</li> <li>• What are the changes in the social capital and empowerment, economic, human assets, physical assets, living conditions post project and compared to non-project areas?</li> <li>• What is the degree of increased capacity of government and NGO organizations responsible for the economic empowerment of women?</li> <li>• What is the livelihood improvement after the interventions?               <ol style="list-style-type: none"> <li>1. Is there increase in household income after interventions?</li> <li>2. What is the consumption and expenditure pattern?</li> <li>3. Is there increase in savings after interventions?</li> <li>4. Is there improvement in the living conditions?</li> <li>5. Is there improvement in access to health and education?</li> </ol> </li> <li>• To what extent can any identified change in enhanced capacities and increased economic opportunities lead to such impact</li> </ul>	<p>Project impacts (e.g. capacity, policy, enabling framework, yield increase, increased income, etc)</p> <p>Reduced poverty incidence, improved social and economic welfare</p> <p>Better living conditions (improved roads, education, household infrastructure, health, welfare perceptions)</p>	<p>Beneficiaries</p> <p>Project team and stakeholders</p>	<p>Document analysis</p> <p>Interview data analysis</p> <p>Physical verification</p>
<b>Relevance: How does the project respond to the priorities of NCWC, Government, donors, and the needs of the target communities?</b>			
<ul style="list-style-type: none"> <li>• What was the basis for initiating the project? And what are the benefits of this new system?</li> <li>• What was the basis of selecting the districts and communities from?</li> </ul>	<p>Existence of clear relationship between project goals, objectives, and NCWC focal areas.</p>	<p>-Project proposal. -Strategic documents of NCWC, ADB,</p>	<p>-Document analysis</p> <p>-Interview with</p>

<ul style="list-style-type: none"> <li>• To what extent do the activities implemented through the project reflect the NCWC, donor, and Government policies and priorities?</li> <li>• To what extent is the project objective and assistance relevant to the needs of the target villages/HH?</li> <li>• Does the project adequately take into account the national realities, both in terms of institutional framework and programming, in its design and its implementation?</li> <li>• To what extent were national partners involved in the design and implementation of the project?</li> <li>• How does the project support the needs of target beneficiaries?</li> </ul>	<p>Degree of coherence between project objectives and national developmental priorities, policies, and plans.</p> <p>Level of involvement of</p> <p>Relevant stakeholder in implementation</p> <p>Strength of linkages between project results and needs of the stakeholders</p>	<p>Tarayana</p> <p>-Government of Bhutan 11<sup>th</sup> 5 year plan</p> <p>-Key project partners, PSC, NGOs, Project Team</p> <p>-Needs assessment studies (baseline)</p>	<p>project team, govt officials, project partners and beneficiaries</p>
<p><b>Effectiveness: Measure of the extent to which the project intended results (outputs or outcomes) have been achieved.</b></p>			
<ul style="list-style-type: none"> <li>• To what extent has the project achieved its expected outcomes? <ul style="list-style-type: none"> <li>○ How effective were the interventions?</li> <li>○ Which interventions were the most beneficial and effective?</li> <li>○ How do these benefits compare between project and non project (control) households?</li> </ul> </li> <li>• What lessons have been learnt from the project regarding achievement of outcomes?</li> <li>• What difficulties/problems affected the effectiveness of the project?</li> <li>• What were the opportunities and challenges faced in implementing the program?</li> <li>• What changes could be made (if any) to the design of the project in order to improve the achievement of the project's expected results?</li> </ul>	<p>Indicators in the project proposal results framework/log frame</p>	<p>-Project management team</p> <p>-Project proposal</p> <p>-Progress reports, mid term reports</p> <p>-Field data</p>	<p>-Document analysis</p> <p>- Interview with project team and partners</p> <p>- Data analysis</p>
<p><b>Efficiency: Measure of how economically resources or inputs (such as funds, expertise and time) are converted into results.</b></p>			

<ul style="list-style-type: none"> <li>• To what extent were activities implemented on time and within budgets?</li> <li>• To what extent were inputs (materials, budgets) available on time and in the right quantity?</li> <li>• Was adaptive management used or needed to ensure efficient resource use? If yes list them?</li> <li>• Were accounting and financial systems in place adequate for project management and producing accurate and timely financial information?</li> <li>• Were progress reports produced accurately, timely and responded to reporting requirements of the project?</li> <li>• Was procurement carried out in a manner making efficient use of project resources?</li> <li>• To what extent partnerships/linkages between institutions and organizations were encouraged and supported?</li> <li>• What partnerships/linkages facilitated? And which ones considered sustainable?</li> <li>• Did the project take into account local capacity in design and implementation?</li> <li>• Was there an effective collaboration between institutions responsible for implementing the project?</li> <li>• What lessons can be learned from the project regarding efficiency?</li> <li>• How could the project have been more efficiently carried out implementation (in terms of arrangement structures, procedures, partnership arrangements etc)?</li> <li>• What change could be made (if any) to the project in order to improve its efficiency?</li> <li>• How and to what extent have project implementation process, coordination with participating stakeholders affected the timely start up, implementation and closure of the project?</li> <li>• Do the project outcomes developed during the project formulation still represent the best project strategy for achieving the project objectives?</li> </ul>	<p>Availability and quality of financial and physical progress reports.</p> <p>Timeliness and adequacy of reporting provided.</p> <p>Occurrence in project design/ implementation approach (adaptive)</p> <p>Specific activities conducted to support the consolidated efforts amongst partners</p> <p>Examples of partnerships that are sustainable.</p> <p>National expertise utilized Value addition from use of these expertise/skills.</p> <p>Evidence of best practices, and what impeded the progress of the project.</p> <p>Timeliness of project activities.</p> <p>Extent of relevance of project outcomes and objectives to changing circumstances.</p>	<p>Project proposal/ evaluation reports</p> <p>Project Team</p> <p>Project partners</p> <p>Beneficiaries</p>	<p>-Document analysis</p> <p>-Interviews</p> <p>-Data analysis</p>
--	--	--	--

<ul style="list-style-type: none"> <li>• Have the project consulted, and made use of skills, experiences, and knowledge of the appropriate government sectors, NGOs, community groups in implementing and evaluating project activities?</li> </ul>	National capacities used and type of partnerships formed.		
<b>Sustainability: Extent to which the benefits of the project will continue after external assistance ceases.</b>			
<ul style="list-style-type: none"> <li>• What is the likelihood that the benefits from the project will be sustained beyond project period?</li> <li>• Can communities continue to have increased level of living conditions without further program support?</li> <li>• How equitable was the distribution of benefits among the households within the village?</li> <li>• To what extent were the services developed under the project likely to continue, be replicated/scaled up after the project support ends?</li> <li>• To what extent were the beneficiaries committed to continue working towards project objectives after it ends?</li> <li>• Did the project develop any sustainability strategy during the project design phase?</li> <li>• Are there social and political risks that may jeopardize the sustenance of project outcomes?</li> <li>• Is sustainability issue addressed more efficiently in the project areas compared to non project areas?</li> </ul>	<p>Evidence of sustainability strategy</p> <p>Commitment from government sectors or NGOs or target communities to continue/ scale up the interventions.</p>	<p>Project document</p> <p>Project team and stakeholders</p> <p>Beneficiaries</p> <p>Developmental plans</p>	<p>Document analysis</p> <p>Data analysis</p> <p>Interviews</p>



## APPENDIX 2. ESTIMATION RESULTS

**Table 2.1.** Demographic characteristics of survey households (SHG)

Characteristics	Control group		Treatment group		Total	
	Mean	Std. Error of Mean	Mean	Std. Error of Mean	Mean	Std. Error of Mean
Education status	7.24	.49	6.74	.55	7.00	.37
Age respondent	38.32	.63	38.35	.65	38.33	.45
Distant from the nearest town/market	37.20	1.56	40.79	1.56	38.97	1.10
Distance from the motorable road	4.12	.75	7.16	.83	5.59	.56
Motorized transport available	.81	.02	.77	.02	.79	.02
Access to credit	.24	.02	.34	.04	.29	.02
Electricity	.97	.01	.98	.03	.97	.03
Total land owned (all types registered with the hh)	3.78	.13	4.86	.36	4.32	.19
Cultivated/used by HH last 2 seasons	2.91	.11	3.52	.17	3.22	.10
Fallow/unused last 2 seasons	2.11	.19	2.83	.76	2.49	.41
sharecropped / rented out	1.53	.17	1.94	.34	1.69	.17
Household size	4.34	.08	4.66	.09	4.50	.06

**Table 2.2.** Demographic characteristics of survey households (VSDP)

Characteristics	Control		Treatment		Total	
	Mean	Std. Error of Mean	Mean	Std. Error of Mean	Mean	Std. Error of Mean
Education Level(Standard)	8.00	.47	8.06	.36	8.03	.29
Age respondent (in years)	34.96	.91	27.79	.80	31.95	.66
Distance from the nearest town/market (in km)	21.49	2.05	35.64	2.62	27.33	1.68
Distance from motorable road (in km)	5.10	1.83	3.86	.79	4.55	1.07
Dummy Motorized transport available (yes=1)	.84	.03	.74	.05	.80	.03
Dummy Access to credit (Yes=1)	.17	.03	.17	.04	.17	.03
Distance from nearest school (in km)	2.79	.38	5.54	2.08	3.10	.94
Distance to nearest health service (in km)	2.91	.28	3.96	1.07	3.36	.49

Dummy Electricity (Yes=1)	1.00	.00	.98	.017	.99	.01
Total land owned (in acres)	4.42	.29	4.66	.44	4.52	.25
Cultivated/used by HH last 2 seasons (in acres)	3.41	.28	3.33	.33	3.38	.21
Fallow/unused last 2 seasons (in acres)	1.83	.23	2.41	.30	2.16	.20
sharecropped / rented out (in acres)	1.69	.13	1.00	.00	1.64	.13
Household size	4.16	.10	4.86	.16	4.46	.09

**Table 2.3.** Demographic characteristics of survey households (ATP)

Characteristics	N	Mean	
	Statistic	Statistic	Std. Error
Age respondent	209	23.70	.24
Education Level(Standard)	200	11.45	.13
Distance from the nearest town/market	151	4.39	.76
Distance from motorable road	137	1.48	.22
Distance from nearest school	94	2.36	.25
Distance to nearest health service	149	3.11	.37
Total land owned (all types registered with the hh)	6	3.23	1.12

**Table 2.4.** Pre and post project share in total project income (%) for SHGs

Period	Group	Agri	Livestock	SHG	Other business trade	Remittance	Others	Mean income
Pre Project	Control	20.44	8.99	0.00	27.49	13.56	29.51	27817
	Treatment	25.79	12.32	5.14	16.85	11.68	28.21	25934
Post Project	Control	17.30	8.61	3.79	41.20	8.25	20.84	107706
	Treatment	20.59	11.24	14.38	20.63	9.40	23.77	112863

**Table 2.5.** Mean annual expenditure (in Nu.) for SHG

Items	Post Project		Pre Project	
	Control group	Treatment group	Control group	Treatment group
Food items	21025.3	25107.1	16216.2	19244.8
Hire of agricultural implements	3972.4	6694.6	2820.0	2812.5
Hire of skilled labor	4933.8	11469.6	5393.0	7717.2
Clothes	9225.2	9435.7	5692.7	7349.4
Housing	11631.5	9893.8	7163.3	7106.5
Children education	14543.9	15334.0	10696.1	12180.3
Household items	10827.1	9862.2	6999.9	8207.1
Car	64222.2	93727.3	71150.0	35180.0
Tractor	6450.0	17660.0		
Motorbike	25666.7	5000.0	2000.0	5600.0
Bicycle	7900.0	9000.0	8250.0	14000.0
TV	5483.6	16893.3	6899.5	19986.5
Chain saws	21528.6	19150.0		17990.0

**Table 2.6.** Consumption Expenditure as a ratio of total expenditure (in %) for VSDP

Share in total expenditure	Pre project				Post project			
	Control		Treatment		Control		Treatment	
	Mean	Std. Error of Mean	Mean	Std. Error of Mean	Mean	Std. Error of Mean	Mean	Std. Error of Mean
Food	44.20	2.57	52.43	3.70	42.30	2.29	47.02	2.84
Agricultural implements	8.78	0.97	9.97	1.40	9.64	1.15	9.52	1.49
Hiring skilled labor	11.03	1.74	7.94	0.63	10.09	1.45	7.33	0.81
Clothes	16.69	1.28	18.35	1.63	15.46	0.95	18.25	1.72
Housing	6.58	0.90	8.06	1.33	8.92	0.84	10.90	1.91
Share of children education in total expenditure	20.23	1.70	19.46	2.22	20.56	1.31	20.62	1.84
Household items	11.04	1.13	10.06	2.07	13.39	1.39	12.81	1.47
Car	15.90	4.56	11.41	3.67	10.38	2.05	11.86	3.64
Tractor	7.72	0.03	9.30	1.41	8.33	0.00	9.18	0.85
Motrobike	7.72	0.03	8.06	0.25	10.42	2.08	8.15	0.18
Bicycle	7.72	0.03	7.09	0.60	8.33	0.00	8.00	0.33
TV	12.11	1.67	12.85	3.48	7.71	0.49	9.35	1.55
Chain saw	16.93	5.45	29.17	9.23	8.33	0.00	49.61	38.95

**APPENDIX 3. ASSESSMENT OF EXPENDITURE AGAINST PLANNED OUTLAY**

<b>Implementing Agency</b>	<b>Activities</b>	<b>Approved Outlay</b>	<b>Disbursement</b>	<b>Expenditure</b>	<b>Progress</b>
BAOWE	Equipment and supplies	92,855	75,476.14	70,596.97	76.03
	Trainings workshops, and seminars	41,500	40,705.76	33,040.72	79.62
	Civil Works	50,000	45,522.93	54,504.75	109.01
	Grant management	81,782	55,314.25	64,284.16	78.60
<b>Subtotal</b>		<b>266,137</b>	<b>217,019</b>	<b>222,427</b>	
Ministry of Labor and Human Resources	Training - others	130,984	130983.61	135888.28	103.74
	Plan and Equipment	42786.89	42786.89	29643.08	69.28
	<b>Sub total</b>	<b>173,770</b>	<b>173,770</b>	<b>165,531</b>	
Tarayana Foundation	Equipment and supplies	87,500	100,000	90183.64	
	Training, workshops, and seminars	87,500	101,007	102327.5	116.95
	Civil service	70,000	57,500	41825.56	59.75
	Grant Management	80,993	112,288	58699.05	72.47
	Contingency	13,507	-13,507	0	0.00
<b>Sub total</b>		<b>339,500</b>	<b>357,288</b>	<b>293,036</b>	86.31
<b>Overall</b>		<b>779,407</b>	<b>748,078</b>	<b>680,994</b>	<b>87.37</b>