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Impact Assessment of Village Development Program on Poverty Alleviation in Nawalparasi, Nepal

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Abstract

A study was conducted in Benimanipiur Village Development Committee of Nawalparasi district of Nepal to examine the impact of Village Development Program (VDP) on poverty alleviation in 2002/03. A representative sample size of 89 was selected randomly by using simple random sampling technique from the participants of VDP. Annual per capita poverty lines of NRS. 4729 and 6391.8 were determined for before and after the implementation of the program respectively using nutrition based consumption expenditure approach. Poverty incidence as measured by head count index was found to have declined from 40.5 to 37.1 percent. The decline in the depth and severity of poverty was found to be faster than that of poverty incidence, which clearly indicates that the poor and medium classes have been benefited proportionately more from the program. In spite of its positive impact on raising the socioeconomic status of people to some extent, updating VDP in some of its policy and implementation aspect was realized for making it more pro-poor and best approach for poverty alleviation in Nepal.

INTRODUCTION

Nepal faces complex social and economic problems based on diverse physiographic conditions, delicate ecological balances, open international borders, a multi-faceted social structure, and skewness of resource ownership and wealth distribution (Sah, 1991). Nepal is ranked as one of the least developed countries of the world where disparities in human development are common across regions with per capita income of about US $ 222 (Seddon, 1987; Jha, 1992; Sharma, 1993; CBS, 1999; Anderson and Tiwari, 1999; Dahal, 1999; Wigforss, 2002). Nepal has been considered as poor country and poverty incidence here is increasing over time (ARTEP, 1974). Agriculture dominates the economy with large (41%) but declining contribution to GDP and source of employment to over 80 percent of the economically active population (Koirala, 2001). But there is no sufficient land for the rural labor force for sustenance. The marginal and small farmers neither have sufficient farm work

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to do throughout the year nor get adequate income from cultivation (Bhatia, 1977). As such, the contribution of the industrial sector to GDP is still less than 10 per cent. Because of the low level of industrial development it has not been possible to divert the excessive population pressure from agriculture to other viable economic activities. Despite the great effort for development of the country since the last five decades, peoples' access to basic infrastructure facilities, i.e. road, school, health, electricity, drinking water, sanitation, etc. is still very low and extremely uneven (Bhandari, 1990; Sharma, 1993; Pandey, 1996; Dahal, 1999). Based on minimum calorie requirement criterion in 1977, 30.4 percent of the rural population was identified living below the poverty line, which went up as high as 42.7 percent in 1988 and 49 percent in 1992 (APROSC, 1995; Dawadi, 1996).

The Ninth Plan (1997-2002) aimed to reduce poverty incidence from 42 to 32 percent. But poverty incidence was found to be about 38 percent at the end of the plan and 17 percent population was classified as ultra poor (NPC, 2001). The Gini coefficient of income distribution is on rise - from 0.3 in 1977 to 0.358 in 1999/00 (Koirala, 2001). However, UNDP (2002) has estimated the rural poverty as high as 44 percent in Nepal. This scenario shows extremely high incidence of growing poverty in rural Nepal. The situation is aggravated by ever increasing population pressure. Social indicators and selected human development indices for Nepal remain below the average for the South Asian Region with high illiteracy rate, lower educational attainment, use of unsafe drinking water, high infant mortality rate, low expectancy of life at birth, inadequate food consumption, poor nutritional level, etc. The degrees of educated unemployment, underemployment and unemployment are very high in Nepal. The unemployment rate was estimated to be about 4.9 percent for 1998 (CBS, 1999). With the formation of dualistic economy problem of unemployment and poor income has been reflected in more pronounced way. The distribution of income and employment is skewed on the basis of ethnicity as well (Timilsina, 1997).

Illiteracy and poor health are other problems related with poverty in Nepal. The low and yearly fluctuating agricultural growth rates, inadequate social service delivery and limited coverage of successful targeted programs are among the prominent reasons for high incidence of poverty in Nepal. The limited resource base, problem of unemployment, misallocation of resources, unequal opportunities, concentration of economic power, absence of knowledge, rapid population growth, environmental degradation, low level of social development, and inequality in income distribution and land assets are other basic reasons for the persistent poverty in Nepal (Hada, 2002). The economy suffered from a number of factors-including poor public expenditure management and a weak financial sector-and Nepal has been unable to exploit its assets-fertile land in the Terai, access to greater donor aid, strong tourism appeal and enormous water resources and hydropower export potential. Poor governance, wide social and geographic disparities and erratic growth in agricultural sector are pushing the poverty incidence up in the country. The reason for poverty in Nepal has touched a number of political and social nerves including absence of transparency and accountability, inequality in the distribution of resources and opportunities and vast disparity in ownership of productive assets. Ineffective administration, ineffective governance and inadequate service delivery system stem directly from weak institutions and sharp limitations in government capacity to monitor and evaluate performance are also the reasons for high incidence of poverty.

Economic growth has not been sufficient to bring about a substantial reduction in poverty. Progress towards attaining most of the Millennium Development Goals (MDGs) in Nepal has remained slow and the country faces many challenges towards achieving them. Not only are social indicators low, but they are alarmingly low for the very poor. There are also wide disparities across income/consumption groups, between urban and rural. There are widespread regional disparities. More specifically, growth has been concentrated in urban areas, leaving behind 86 percent of the population who live in rural areas, where per capita agricultural production has grown minimally and the overall level of economic activity has been sluggish. Rural poverty rate is nearly twice as high to urban poverty rate. Compounding the situation is the virtual absence of poverty monitoring system; hence, hampering policy formulation and evaluation of outcomes.

In this scenario HMG/N initiated VDP (Village Development Program) under PDDP in 1996. VDP is a people centered program whose basic objective is to mobilize local people in the form of their own organization, to promote their development through their own and other resources, and to actively participate in decision making process for improving their lives and villages. VDP uses social mobilization as a tool for fulfilling its objectives. This study mainly focused on the following research question. What is the impact of VDP on poverty alleviation and income distribution in Nawalparansi? Impact assessment of the VDP was necessary for finding out the effectiveness of the program in the fulfillment of its objectives and find out the alternative ways to reduce poverty.

METHODOLOGY

Benimanipur VDC of Nawalparasi was purposively selected for the study as it was one of the VDP implemented VDC for the first phase in 1996 in Nawalparasi. In addition, it was relatively easier to access for the researcher. Sampling frame comprised those households who were directly involved in the Community Organizations (COs) formulated by the VDP. First stage field survey was carried out for preparing the sampling frame. All the people of research site who were involved in the COs and enjoying the benefit of the program directly were taken as the target population.

A total of 89 households were chosen randomly using simple random sampling technique. About 10 percent households were included in the sample from each Community Organization (CO). Adequate attention was given in determining the sample size so that the chosen sample size would represent the entire target population. Pre-tested and semi-structured questionnaire was used for collection of the information from the respondents. Both primary as well as secondary sources of information were used for the study. The data on per capita per day calorie intake of relatively poor households and average recommended per capita per day calorie requirement as well as price index of food, non-food and housing items were collected from the secondary sources. Primary data on impact of VDP on socioeconomic conditions of the people such as situation of health, education, income, debt clearance, food, clothing, saving, consumption pattern, etc were collected from the selected respondents/households by using structured and pre-tested questionnaires. The information was collected through interview,

group discussion and direct observation. Data were analyzed by using SPSS, MINITAB, DAD and MS Excel.

Construction of the food poverty line

All consumption data collected were converted into equivalent consumption by using equivalence scale and then to real consumption figures by deflating the price indices of food, non-food and housing items using the price indices of Eastern and Central Terai constructed by Lanjouw et al. (1998). Since there was difficulty to construct the price index based on the primary data due to unavailability of sufficient information for the construction of the price indices it was assumed that price index of Eastern and Central Terai would best reflect the price index of the research site. Minimum requirement of daily per-capita calories for Nepalese people (2250 Kcal) and average per capita daily calorie intake of the relatively poor households (1530 Kcal) were derived from the secondary sources (NPC, 1983; FAO 2000). Cost of the food bundle was determined based on the average price prevailing in the research site. The food poverty line was calculated by using the following formulae:

$$ZF = \left(\frac{\text{Recommended Average Minimum Calorie Requirement for Nepalese People}}{\text{Calories in Average Food Bundle for Relatively Poor Households}} \right) * \langle \text{Average Cost of Food Bundle} \rangle$$

Where ZF is the food poverty line

Construction of the total poverty line

Simple non-parametric procedure, used in obtaining a final poverty line for Nepal (Lanjouw et al., 1998) was used for deriving the final poverty line. The median per capita total expenditure was calculated for those households who had per-capita food expenditures in a small interval (of plus or minus one percent) around the food poverty line. The food poverty line was then simply scaled up by this average to construct the final poverty line. Successively larger intervals were not selected because most of the observations were concentrated plus or minus one-percent point around the food poverty line and only few observations were having larger intervals.

Enrollment and dropout rate calculation

$$\text{Enrollment Rate} = \frac{\text{No. of Actually Enrolled Individuals}}{\text{Total No. of Individuals Eligible for Enrollment}}$$

$$\text{Dropout Rate} = \frac{\text{No. of the students dropped out during the school year}}{\text{No. of the students who were in attendence at any time during the school year}}$$

Gini index of income distribution

To calculate the Gini coefficient of the income, rank of income of each household was calculated. It was then calculated by employing the following formula (Kanel, 1993):

$$G = 1 + \left(\frac{1}{n}\right) - \left(\frac{2}{n^2 \mu}\right)\left[1y_n + 2y_{n-1} + \ldots\ldots + ny1\right]$$

Where,

G = Gini coefficient

y = Income for $y_1 \leq y_2 \leq \ldots \leq y_n$

n = Number of observation

μ = Mean value of y

The same procedure was employed to calculate the Gini coefficient of consumption and land distribution.

RESULTS AND DISCUSSION

Impact of program on poverty alleviation

Consumption expenditure approach was used for calculating the poverty lines for the two periods. The food poverty lines estimated were Rs. 6.3 and 10.03 per capita per day, hence Rs. 2299.5 and 3660.95 per capita per year for before and after program respectively. The total poverty lines as estimated were Rs. 4729 and 6391.8 per capita per annum. These figures are much higher than the national average as calculated by NPC and Lanjouw et al. for various periods for Nepal. One possible cause for this might be due to the use of different equivalence scales used in this case, as poverty lines are highly sensitive to the use of equivalence scales. Another cause for this high estimation of poverty line may be due the differences in the time lag, differences in the reference area and different methodology used in determining the poverty lines.

Poverty incidence

Head count index was used to denote the poverty incidence. The analysis showed that the poverty incidence has been declined on average by 1.5 percent per year. Before implementing the program about 40.5 percent of the population of Benimanipur was surviving under poverty line where as this figure has been declined to 37.1 percent in 2002 in six years interval (Table 1). Though it is very small change in the poverty incidence it clearly provides guidelines that some progress has been made to alleviate the poverty in this interval. It also indicates that attempts should be made to further decline the poverty incidence in the faster rate than this figure.

Table 1. Poverty status in Benimanipur before and after program

Poverty measures	Before	After	Change (Growth Rate)
Head count index	40.45 (0.052)	37.08 (0.051)	-1.47
Poverty gap index	11.24 (0.019)	8.35 (0.015)	-4.92
Poverty severity	4.50 (0.011)	2.77 (0.009)	-7.92
Sen's poverty index	15.29 (0.025)	11.13 (0.021)	-5.26

Note: All figures except standard deviation (figures in the parentheses) are expressed in percentage.

Source: Field Survey by the author 2002/03.

Depth of poverty

As head count index is relatively insensitive to the depth of poverty, poverty gap index was employed to measure the depth of poverty. The poverty gap index was 11.2 percent before the program which declined to 8.4 percent by 2002 showing that the depth of poverty decreased at an annual rate of 4.9 percent (Table 1). Thus economic growth is much effective in reducing the depth of poverty than reducing the poverty incidence in Benimanipur.

Severity of poverty

The severity of poverty was measured by the Foster-Greer-Thorbecke (FGT) index, the mean of the squared proportionate poverty gaps. Unlike the headcount ratio and the poverty gap index, it takes into account inequalities among the poor. The FGT index is sensitive to the distribution of consumption among the poor; the calculation more heavily weights those whose consumption falls far below the poverty line. As indicated in Table 1, the severity of poverty in Benimanipur declined at an annual rate of 7.9 percent after VDP implementation. The severity of poverty was 4.5 percent before the program where as this figure has declined to 2.8 percent by now. Since the severity of poverty measure gives much more weight to the very poor and less weight to not so poor, its decline indicates that the relatively poor households have been benefited much as a result of VDP.

Intensity of poverty

Extent of poverty was analyzed by employing the Sen's poverty index. The analysis clearly showed that the extent of poverty has declined over time from 15.3 percent to 11.1 percent after program (Table 1). Higher value of Sen's poverty index will imply the higher intensity of poverty and vice-versa. The decreased index value clearly indicates the decreased intensity of poverty in Benimanipur after program intervention.

Poverty and ethnicity

While comparing the poverty in various ethnic groups it was found out that the highest percentage of poverty was found to be in Mongolian community consisting of Gurung and Magar followed by Brahmin, Chhetri and others such as Gini and Newars (Table 2). Of the total poor almost half were found in Mangaloid group. Poverty is deeply rooted in so-called lower caste Mangoloid community and poverty severity is also high in this ethnic group. This clearly indicates that Magars and Gurungs are lagging behind in terms of socio-economic development in Benimanipur. It does not mean that so-called higher caste Brahmins are well off over there. Poverty is severe in Brahmin community as well in Benimanipur. The main reason for higher incidence of poverty in Mongoloid group might due to the lack of awareness, lack of education and faulty culture, and negligence of development agencies to these communities.

Table 2. Poverty in ethnic groups in Benimanipur

Ethnic groups	Poverty measures		
	Head count index	Poverty gap	Poverty severity
Brahmin	11.24	1.78	0.38
Chhetri	5.62	0.92	0.16
Mangaloids	17.98	5.26	2.15
Others	2.25	0.42	0.08
Total	37.08	8.38	2.77

Note: All figures are expressed in percentages.

Source: Field Survey by the Author 2002/03.

Occupation and poverty

Highest percentage of poverty incidence was found to be in agriculture based community. Poverty incidence and depth was relatively low in service based and retired army based community (Table 3). The highest incidence and depth of poverty in agriculture-based community might be due to the lack of assured marketing and price fixation mechanism for the farmer grown produce. The people can't sell their milk due to the lack of market and assured road facility to send milk to the nearby market. It hinders the commercialization in agriculture, which ultimately hinders the socio-economic development of the country, as majorities of the people are dependent in Agriculture.

Table 3. Occupation of household head and poverty

Occupation	Poverty measures		
	Head count index	Poverty gap	Poverty severity
Agriculture	31.46	7.30	2.53
Service	3.37	0.60	0.12
Business	1.12	0.36	0.12
Seasonal migration	0.00	0.00	0.00
Others	1.12	0.13	0.01
Total	37.08	8.39	2.77

Note: All figures are expressed in percentages.
Source: Field Survey by the Author 2002/03.

Impact on income distribution

Impact on income distribution was analyzed by employing the Gini coefficient and Lorenz curve, the most widely used measure of inequality. Since the Gini index is a single measure of inequality it may not completely reveal changes in income distribution, so Gini index was supplemented with the quintile shares. Income inequality in Benimanipur is at declining rate. The bottom 20 percent of the population had a 2.3 percent share in per capita annual income, while the richest 20 percent had a 59.7 percent share before the initiation of the program. Fortunately, the income share of the bottom quintile increased to 2.9 percent, while that of the top quintile declined to 55.4 percent after the program implementation (Table 4). This might be due to the fact that the rich people used to increase their income share by exploiting the poor through charging higher interest rate. But after program they were deprived of such malpractice. A low-income individual at the 10th percentile had an income that is only 22 percent of median income, which increased to 24 percent after program intervention. Similarly high-income individual in the 90th percentile had an income that is 354 percent of the median income prior to the program initiation, which increased to 387 percent after program intervention. It implies that though inequality has declined slightly over time, the inequality is still very high.

Table 4. Inequality of per capita annual income

Particulars		Before	After
Gini index of population		57.08	51.17
Gini index of household		51.96	50.61
Quintile shares	First	2.30	2.90
	Second	6.10	6.70
	Third	10.30	13.10
	Fourth	21.60	21.80
	Fifth	59.70	55.40

Note: All the figures are expressed in percentage.
Source: Field Survey by the Author 2002/03.

The bottom 40 percent households had only 9.8 percent share in total household income while this figure increased to 10.4 percent after program (Figure 1). The middle 40 percent of the households had 30.5 percent share in total household income, which went up as high as 34.6 percent after program. On the other hand, the top 10 percent of the households had 37.4 percent share in total household income prior to the program intervention while this figure declined to 34.8 percent after program. Similarly the income share of top 5 percent of the households has also declined slightly from 20.8 to 19.9 percent after program. This implies that poor and middle class households have been particularly benefited from the program. The decline in the share of income of top 10 and top 5 percent households might have the same logic as in the per capita annual income.

The Gini index, an overall measure of inequality of population decreased to 51.2 percent from 57.1 percent, which is still much higher than the national average (0.358). However, there was very small or negligible change in the Gini coefficient of household income.

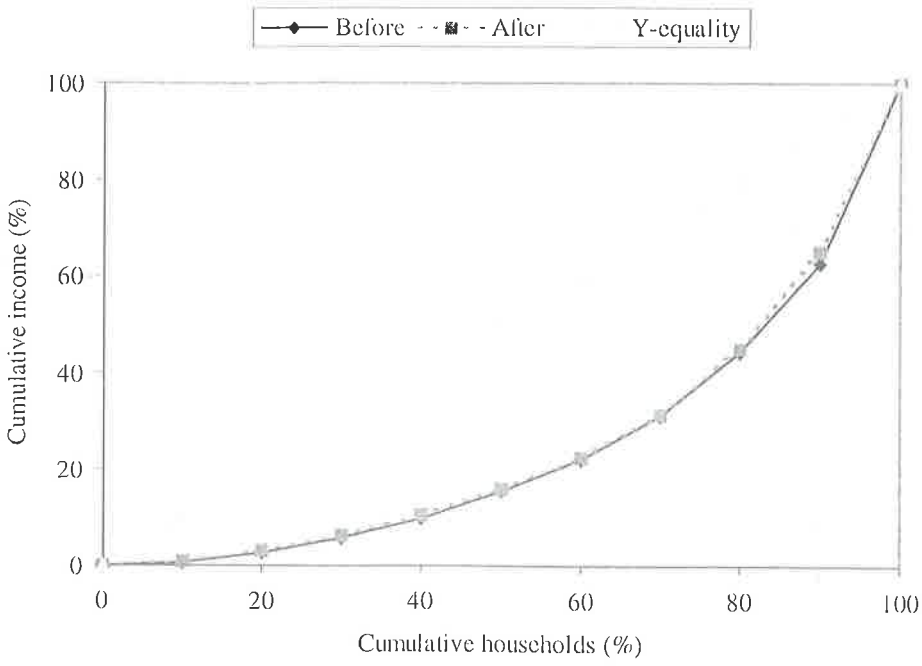

Figure 1. Lorenz curve of income distribution

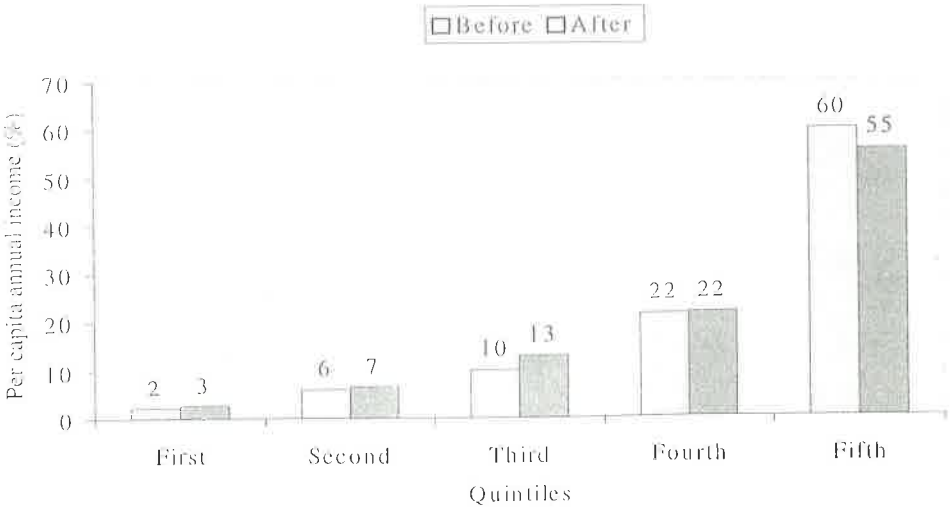

Figure 2. Per capita income shares by quintiles

Decreased inequality implies that the benefits of economic growth have flowed uniformly across the population. The proportional benefits received by the poor are more than those of the rich. Thus, the poor and middle class have been particularly benefited from the program, which can be observed by comparing the estimates of per capita income shares of these classes of people. However, disparity though has declined over time, the per capita income share of lowest 20 percent population is still low (Figure 2). This indicates the need to bring additional program to benefit the poor proportionately more.

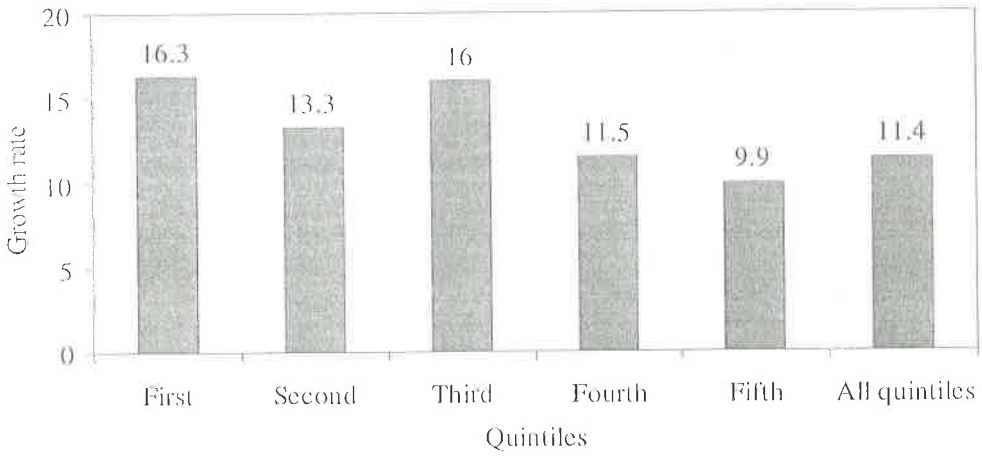

Figure 3. Growth rates of per capita income by quintiles

Per capita annual income in Benimanipur grew at an annual rate of 11.4 percent after VDP implementation. The annual growth rate of the bottom quintile is about 16.3 percent, while that of the top quintile is only 9.9 percent (Figure 3). It clearly implies that the poorest are benefited proportionately more than the richest. Pro-poor economic growth proportionally benefits the poor more than the rich. Thus Benimanipur, is in fact, experiencing pro-poor growth, and much of its benefits are trickling down to the poor class people.

Atkinson's index of income distribution

The decline in the index of Atkinson clearly indicated that the magnitude of inequality in income distribution declined to some extent (Table 5). As the value of epsilon increases it gives increasingly greater weight to the poor. The program has negligible impact on reducing income inequality. This gives important implication to the policy maker that effective program should be designed for further improvement of income and consumption distribution among the poor.

Table 5. Atkinson's index of per capita income distribution before and after program

Periods	Epsilon = 0.5	Epsilon = 1	Epsilon = 2
Before	0.271(0.041)	0.473 (0.055)	0.729 (0.049)
After	0.212(0.022)	0.395 (0.037)	0.653(0.046)

Note: Figures in the parentheses indicate the standard deviation.

Source: Field Survey by the Author 2002/03.

Impact on household income generation

To analyze the impact of amount of loan and training provided by the program on income generation a multiple semi log regression equation involving dummy was run. Some of the outlying and unusual observations were removed. The regression equation obtained through analysis in MINITAB is as follows:

$$\ln \hat{avginc} = 9.46 + 0.00397\ \text{land} + 0.000104\ \text{loan} + 0.542\ \text{training}$$
$$(0.003) \qquad (0.000) \qquad (0.013)$$

Adjusted R Square: 34.6

F-Ratio: 14.93, n = 75

Figures in the parentheses indicate the p- values.

avginc = Annual average household income after program (Rs.); Land = Size of land

holding per family after program (ha); Loan = Average amount of loan taken by farm family per year after program (Rs/year); Training = Training taken from the program in any discipline (dummy).

The model was found to be highly significant at 1 percent and 5 percent level of significance. The amount of loan and landholding size contributed significantly to the household average annual income. On average other things remaining constant, the nominal per year household income increased by Rs. 0.0001 for every rupee increase in amount of loan. Similarly, other things holding constant the average annual income of household with training appeared to be greater by Rs. 2.48 than that of the households without any training from the program. The coefficient of training in the model is 0.542, but here we interpreted it as 2.48. It is because in semi-log model the coefficient of dummy variable should not be interpreted straightforward as in just linear model. The antilog of coefficient of training was obtained, which was found 3.48. Then one was subtracted from this figure to obtain 2.48. Thus, the contribution of training on household income seems to be positive and significant at 95 percent confidence interval but its contribution is statistically insignificant at 99 percent confidence level. Thus, the contribution of amount of loan seems to be negligible though positive. The adjusted R Square of the model is only 34.6 percent. It implies that the explanatory variables or repressors explain only 34.6 percent variation in the model. The relatively low adjusted R Square of the model might be attributed to smaller sample size. The other factors such as number of livestock and types, education of family members, fertility status of the soil, etc. might also affect the household income. But they were not included in the model. Therefore, the model is too simple in nature and it should be interpreted cautiously.

Impact on education

Education is of utmost importance for uplifting the living standard of the people. To examine the impact of VDP on education literacy rate, enrollment rate as well as drop out rates was calculated based on the observed data.

Impact on literacy rates

While analyzing the literacy rate it was found out that there was much improvement in the literacy rate of female than that of male although the literacy rate of male was found to be higher than their female counterparts for both the periods (Table 6). The literacy rate of male and female in Benimanipur has been found to be much higher than that of national average, which indicates that people of Benimanipur have already understood the importance of education in human civilization. However, many of them are literate only to read and write having no formal education, and majority is deprived of higher education.

Table 6. Literacy rates of male and female before and after program

Periods	Before (Percent)	After (Percent)
Male	68.60	76.40
Female	45.80	62.30
Total	57.20	69.35

Source: Field Survey by the Author 2002/03.

Impact on enrollment rates of students

The primary school enrollment rate for male and female as estimated were 63.2 and 44.2 percent respectively, which rose to as high as 93.7 and 71.2 percent after initiation of the program (Table 7). Only 56 percent of the male and 41.4 percent of the female were being enrolled in secondary school prior to the program whereas this figure has been increased to 73 and 61.7 percent for male and female respectively after the program implementation. This in fact is a good deal of progress. But in college enrollment rate the condition of female enrollment is still not so satisfactory although progress has been made in this regard. The estimated data clearly shows that the enrollment rate of female is much lower than their male counterpart in Benimanipur which clearly indicates the need to encourage the female to enroll in school/ college through the implementation of additional program on education. Most of the illiterate Brahman households are not willing to join their girls to the college because of the location of college at distant place and their own traditional stereotype feeling that girl should not be sent out of the home in their young age. Such traditional attitude though has been losing the ground rapidly after program, still it is deeply rooted in some of the population sub-groups. On the other hand some of the lower caste households are still hesitating to send their girls beyond primary school education because of their lower socioeconomic status.

Table 7. Enrollment rates of male and female students before and after program in Benimanipur

Education level	Before		After	
	Male	Female	Male	Female
Primary	63.20	44.20	93.70	71.20
Lower secondary	61.10	50.00	86.20	66.00
Secondary	56.00	41.40	73.00	61.70
College	48.80	16.70	61.10	37.50

Source: Field Survey 2002/03.

Impact on dropout rate of students

Analysis of the data on dropout rates clearly shows that dropout rate is still very high for both the sexes in each level or grade. The estimated data shows that drop out rate though decreasing over time the condition is still worse in case of female (Table 8).

Table 8. Dropout rates of male and female students before and after program

Grade/level	Before		After	
	Male	Female	Male	Female
Primary	48.00	68.20	40.00	50.00
Lower secondary	50.00	66.70	43.00	50.00
Secondary	44.00	71.40	43.00	65.20
College	45.90	60.00	40.00	50.00

CONCLUSIONS

The findings revealed that the poverty incidence as measured by Head Count Index declined at the annual rate of 1.5 percent after program. The poverty incidence in Benimanipur was found to be declined to 37.1 percent from 40.5 percent after program. The depth of poverty as measured by Poverty Gap index declined from 11.2 to 8.4 percent and poverty severity as measured by FGT index declined from 4.5 to 2.8 percent after program. The rate of decline of depth and severity of poverty were higher as compared to poverty incidence. More than half of the total poverty was found to be concentrated in Mongoloid ethnic groups and agriculture based communities drawing immediate attention of planner and policy makers towards these communities. The intensity of poverty as measured by Sen's poverty index declined from 15.3 to 11.1 percent after program. The inequality in per capital income as measured by Gini index was found to be declined from 0.571 to 0.512 after program. The inequality in income distribution as measured by Atkinson's index also declined after program. However, inequality in income distribution was found to be much higher than the national average indicating negligible impact of program on improving income distribution. The growth rate of per capita income was found to be highest among the bottom 20 percent of poorest people indicating that the poor are benefited proportionately more as compared to rich. Thus, there was sufficient reason to claim that VDP initiated economic growth was pro-poor in Benimanipur. The literacy and enrollment rate of male and female was found to be improved significantly after program. However, the females were lagging behind in terms of literacy and enrollment in various grades. The presence of girls in college is still negligible in Benimanipur. The dropout rate of male and female was declined significantly after program. But dropout rate of female was found to be still higher in all grades with highest dropout rate in secondary school.

Overall, the findings imply that policies and programs should be formulated and implemented to decrease the poverty incidence, depth and poverty severity in faster rate in Mangaloid ethnic groups and community with agriculture as major occupation and income source as poverty is still deeply rooted in these communities in Benimanipur, Nawalparasi. One possible option might be to provide the income and employment oriented training to the people as training has significant contribution to annual household income generation. Program should pay due attention to decrease the inequality in income distribution as it is still highly skewed in favor of rich. Proper education policy should be formulated and implemented to improve the education status. VDP should reformulate its policy by incorporating certain yearly target to reduce the poverty to certain level in specific locality taking into account the socioeconomic background, geographical setting, accessibility condition, etc. so that it could monitor the poverty accordingly and improve its efficacy.

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