Remittances as a Means of
Poverty Reduction in Selected VDCs of Nepal

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Abstract

There are two different views regarding utilization of remittance-one advocates remittance as giving rise to consumerism, the other claims it as a core agents in the development process. In Nepal, the two most reported uses of remittances received are: "for daily consumption" and "repayment of the loan". However, in general it is considered that international migration and remittances significantly reduce the level, depth, and severity of poverty in the developing world. Various studies shows that remittances help lift households out of poverty. This paper aims at exploring poverty reducing impact of the remittances income in some of the VDCs of Nepal using primary data.

Three VDCs from hill, tarai and semi-urban areas of Nepal were selected for the study. Propensity Score Matching (PSM) approach was used to compare the status of the remittances receiving households (RRHH) with that of the remittances non-receiving households (RNRHH). The study assumes differences in the socio-economic status between the RRHH and the RNRHH as the visible and tangible impact of remittance on poverty reduction. For ascertaining the socio-economic differences in the selected VDCs, three broad indicators of people's well-being: Economic Security; Human Development; and Empowerment and Social Inclusion were analyzed.

Result of the analysis shows improved socio-economic status of the RRHH compare to the RNRHH in the study area. This enabled the RRHH in seeking good education, better health facilities/services. It can be hoped that if the RRHH continuously adopts foreign employment as their occupation and invest the remittance earning in productive sector, in the long run these investments will benefit changing attitude to realize standard of living.

Key words: Remittance, Poverty reduction, RRHH, RNRHH

Background

Evidences on the use of remittances are quite diverse and even contradicting. There are two different views regarding utilization of remittance. Many household surveys around the world claim that two thirds of remittances go to consumption, mainly on food and maintenance followed by housing. It claims that remittances are not invested in productive sectors, spent only on consumption (Massey &Parrado, 1994). On the other hand, the study conducted in China claims that migrants are core agents in the development of the Fuijan province of China (Zhu, 2006). Here, it is claimed that remittances are invested in physical

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and human capitals. In the case of Nepal, the two most reported uses of remittances received are: for daily consumption (79.9%) and repayment of the loan (7.1%) respectively (CBS, 2010).

It is considered that international migration and remittances significantly reduce the level, depth, and severity of poverty in the developing world. Evidences show that remittances help lift households out of poverty.

Different development practitioners have different understanding of poverty. The most common and preferred methodology for most officials in development agencies of government is the poverty line approach which defines poverty in relation to a minimum level of income that is required to fulfill basic subsistence and productive needs. If people are found to fall below a given income level, they are then deemed poor.

Though, the poverty is often defined by one dimensional measure (income level), poor people do not just suffer from a lack of income. No one indicator alone can capture the multiple aspects of poverty. Several factors contribute poverty. Broadly, economic well beings; capabilities, and inclusion are the multiple dimensions of poverty (UNDP/HDR 2011).

In Nepal, poverty issues have received national policy attention from time to time. The national survey on Employment, Income Distribution, and Consumption Pattern in Nepal by the Planning Commission of Nepal (NPC/N) in 1976/77 and Multipurpose Household Budget Survey (MPHBS) in 1984/85 conducted by Nepal Rastra Bank were the preliminary attempts to estimate poverty in Nepal.

Later, the Central Bureau of Statistics (CBS) of the NPC/N conducted the Nepal Living Standard Survey (NLSS) in 1996, 2004, and 2010. Surveys suggested that headcount rates of poverty have dramatically declined in Nepal between 1995-96, 2003-04 and 2010-11.

The incidence of poverty in Nepal declined by about 11 percentage points (or 26 percent) over the course of eight years (between 1995-96 and 2003-04) and 5.8 percentage points during the year 2003-04 and 2010-11. Average decline in poverty incidence could be as of 1.12 percent per year.

In the light of multi-dimensionality nature of poverty in Nepal the Tenth Plan (2002-07), which is also called the Poverty Reduction Strategy Paper (PRSP), had divided poverty into three broad categories – income poverty, human poverty and social exclusion.

Productive utilization of remittances would be necessary for reducing poverty. Most research carried out discussed only poverty alleviation in relation to the economic growth. There is no doubt that remittance provides reliable source of foreign exchange. It could lead to stable macroeconomic indicators and enhances living standard at the household level. Only addressing poverty relating remittances with standard of living would not satisfy the sustainability and economic growth. There is lack of micro level studies ascertaining the impact of remittances on poverty in the rural and urban sector. Thus, understanding of the impact of remittances in Nepal's national development and its management is poor.

The present study analyzed the impact of remittance on poverty reduction in terms of difference in socio-economic status of the Remittances Receiving Households (RRHH) and the Remittance Non-receiving Households (RNRHH) of three selected Village Development Committees (VDCs): Katahari of Morang district, Hatiya of Baglung district and, Changunarayan of Bhaktapur district based on their topography.

Literature Review

NRB (2012) study on impact of remittances on various socio-economic dimensions of remittances recipient households in the Dhanusha District of central development region of Nepal shows substantial rise in agricultural income after they started receiving remittances; the land purchase was most significantly affected by the remittance income; significant amount were spent in education; and the women's decisions regarding children's education and financial transactions were positively affected. The study was based on the data collected from 459 households surveying both remittance-recipient households and non-recipient households and propensity score matching (PSM) approach was used for analysis purpose.

Lokshin, Mikhail and Elena (2007) concluded that almost 20 percent of the decline in poverty in Nepal between 1995 and 2004 can be attributed to increased work-related migration and the resulting remittances sent back home. The study was based on the panel data 1995/1996 (NLSS-I) and 2003/2004 (NLSS-II) by the Nepal Central Bureau of Statistics. The sample includes information on 3,912 and 1,160 households, respectively.

Bhadra (2007) shows that women's remittances have had a significant impact on overall poverty reduction and household capital formation leading to improvement in the quality of life. The study also stressed that women migrants bring with them the so-called social remittances. It had increased women's self-esteem by bringing about a positive change in their gender identity and gender roles, leading to a decrease in violence against women and an increase in love and respect among the family and community. The study was conducted in two remittance-based towns Dharan in eastern and Pokhara western development regions of Nepal. The sample size was 421, comprising 247 returnee migrants and 174 household members.

There are limited studies trying to assess the impact of remittances on poverty reduction on household level. Studies claim that in Nepal remittances not only help to reduce poverty, but also to reduce the depth and severity of poverty. All the studies are based on panel data of NLSS. Thus, this paper aims at exploring poverty reducing impact of the remittance income in some of the VDCs of Nepal using primary data.

Data and Methods

Theoretically, this paper assumes that foreign employment and the remittances send back home, if properly utilize will contribute in reducing poverty, both in terms of head count indexes and inequalities. At micro level, it is expected that remittances earning increases the economic status of the migrant's household, which enables the member for seeking good education, better health facilities/services and nutritious food. This will lead to the development of human resources. Once the basic needs of the human beings are fulfilled, as per the Maslow's need hierarchy theory, human tends to seeks for social needs. Thus, need for social inclusion and empowerment will follow. Thus, economic security, human development, and empowerment and social inclusion are considered as immediate proper utilization of remittances income.

This paper is based on primary data obtained in order to ascertain the socio-economic status of the remittance receiving and non-receiving households, and analyzing the impact of remittances on poverty using Propensity Score Matching (PSM) technique for comparing the socio-economic differences. Data were collected from three selected VDCs from hill, tarai, and semi-urban areas of Nepal.

The survey for collecting primary data was administered to collect multiple dimensions of socio-economic aspects of remittances receiving and non-receiving households of the study areas. For selecting the study area, the major basis was district-wise information on number of migrants published by Department of Foreign Employment (DoFE) in 2011. Hence, the districts according to the ecological belts with higher number of migrant's population in the year 2011/12 were selected as study districts. On the basis of above mentioned criteria, following districts were selected for the study:

Table 1: Selection of Study Districts

Ecological Belt	Selected study districts as of the year 2010/11	
	Districts	Migrant population
Hill Area	Baglung	4163
Tarai Area	Morang	10389
Semi-Urban Area	Bhaktapur	986

Source: Annual Progress Report, DoFE, 2011.

Number of households in the VDC, highest number of migrant households in the VDC, and distance between the VDC and district headquarters (within 5-30 kms range) were specific criteria for selection of VDCs. Hence, following VDCs were selected as the study area within the districts.

Table 2: Selection of Study VDCs

Ecological Belt	Districts	VDCs	Population in VDC	Number of Households in the VDCs	Number of households with migrants	Distance from the district headquarter
Hill Area	Baglung	Hatiya	7,240	1723	113	27 km
Tarai Area	Morang	Katahari	24,395	4,895	264	5 km
Semi-Urban Area	Bhaktapur	Changu Narayan	6,211	2,750	102	8.5 km

Source :   District Development Profile of Nepal, 2011/12, CBS/Nepal and Annual Progress Report, DoFE, 2012.

The sample size was determined on the basis of Confidence Interval Approach (ADB, 2004 pp 117) by using the following formula:

$$n = \frac{z^2 pq}{e^2}$$

where,

n   =   Sample size

z   =   standard error associated with the chosen level of significance = 1.96 (for 5 percent level of significance)

p   =   estimated variability in the population (in our case "p" represent the number of households receiving remittances).

q   = $1 - p$

e   =   acceptable error = 0.05 (assuming 5 percent margin of error)

Calculation of sample size is given in Annex 1.

The calculated sample size for the three VDCs- Katahari, Hatiya, and Changunarayan VDCs assuming 5 percent margin of error were 97 households, 80 households, and 56 households respectively. For the study purpose sample size is taken by calculating the mean value (78 households from each VDC) of the three calculated sample size of the selected VDCs. Remittance non-receiving households from each VDC were also incorporated in the study as a control group for comparison to ensure elimination of selection bias. The RRHH and the RNRHH groups can be compared in all aspects except that they have not received the remittances. 40 percent of the total numbers of RRHH (i.e, 32 RNRHH) are taken as sample size of the RNRHH (based on researcher's discretion). Thus, the total sample size (sample households) per VDC becomes 110 households.

Comparison of impact was done using PSM technique and empirical analysis method. PSM technique is considered as one of the important quasi-experimental approaches. The propensity score is defined as the probability of participation in a program as a function of several socio-economic and other factors. This technique was specifically applied to identify the effects of remittances, assuming to compare the status of the RRHH with that of the RNRHH in the absence of baseline data for impact study. Such comparisons are viewed as a state-of-the-art approach in order to achieve best comparisons of a particular effect of remittances in any study area. The differences in socio-economic status between the RRHH and the RNRHH are considered as the visible and direct impact of remittances on poverty in this study. A questionnaire was developed and executed to collect information from 324 sampled households (191 RRHH and 133 RNRHH) relating to socio-economic status of the RRHH and the RNRHH.

The Tenth Plan (2002-07), which was also the Poverty Reduction Strategy Paper (PRSP), has defined poverty and indicators to monitor measure and analyze at the macro level. It had divided poverty into three broad categories – income poverty, human poverty and social exclusion. There are total 31 most commonly used indicators reflecting the economic security, human development and vulnerability and inclusion aspects of household poverty (See Annex 2).

For ease of the study, socio-economic status has been broadly categorized into three poverty indicators namely: Economic Security; Human Development; and Empowerment and Social Inclusion.

The study assumed that family size, types of house and its ownership, accessibility to household facilities are the visible factors and land ownership, occupations, incomes and expenditures are considered determinants indicators for economic security.

Whereas, human development has two sides: the formation of human capabilities such as improved health, knowledge and skills and the use of their acquired capabilities - for leisure, productive purposes or being active in cultural, social and political affairs. The study is focused on health, education, and sanitation related activities and behavior to ascertain the effect of remittances on human development aspects.

For ascertaining the impact of remittances on empowerment and social inclusion the study focused on the differences in the capacities of RRHH and RNRHH to acquire information, understanding about the basic rights, and participation in human development programs and other community activities.

Empirical analysis were conducted to identify differences between socio-economic status of the RRHH and RNRHH. Hypotheses were set to analyze using Categorical Principal

Components Analysis (CATPCA). Following procedures were adapted to module the nonlinear relationships between variables.

After the defining the iteration history of the algorithm, the model summary, including the eigenvalues of each dimension, is identified. They are measures of how much variance is accounted for by each dimension. It is used as an indication of how many dimensions are needed. For the purpose of analyzing economic security indicators the default number of 8 dimensions was used. Similarly, for human development and empowerment and social inclusion indicators, the default number of dimensions used were 15 and 8 respectively (See Annex 3). As a general rule, when all variables are either single nominal, ordinal, or numerical, the eigenvalue for a dimension should be larger than one. Based on the Cronbach's alpha in the model summary tables numbers of dimensions which can explain the relationship patterns are identified. One Sample Kolmogorov-Smirnov test for normality was conducted to suggest which test would be suitable for predicting socio-economic difference on mean of indicators between the remittance receiving and not receiving households. Following is the result of one Sample Kolmogorov-Smirnov test for normality:

Table 3: One-Sample Kolmogorov-Smirnov Test

	Economy Security	Human Development	Empowerment and Social Inclusion
Kolmogorov-Smirnov Z	1.277	2.503	3.274
Asymp. Sig. (2-tailed)	.077	.000	.000
a. Test distribution is Normal.			
b. Calculated from data.			

From one Sample Kolmogorov-Smirnov test for normality in table 3, economic security indicators has normal distribution as the p-value associated with this test is more than 1 percent level of significance. This suggests using a parametric test for testing whether there is a significance difference on mean of economic security between remittance receiving and not receiving households. Whereas in the case of human development and empowerment and social inclusion indicators there is non-normal distribution as the p-value associated with this test is less than 1 percent level of significance, and suggest for non-parametric test for testing the difference on medians of indicators. Thus, it suggests t-test for economic security indicators and Z (Mann-Whitney U) test for other two indicators.

Results and Discussion

The role of remittance income is vital for improving the socio-economic status of the people in the least developed country like Nepal. Income distribution pattern in the society might have varied due to the remittance, resulting into differences in their socio-economic conditions.

The result of empirical tests table 4 shows a significant difference in economic status between households receiving remittance and not receiving remittance. Since the   p-value for this test is less than 1 percent level of significance, which indicates that there, is an impact of remittance in changing the economic security mostly represented by total monthly income and expenditure. The table shows, RRHH has more influence of economy security than RNRHH on the average. It means that the remittance has played vital role in improving economy security among the migrant households in the study region.

Table 4: Independent Samples Test

Levene's Test for Equality of Variances		F	Sig.	t	df	Sig. (2-tailed)
Economy Security	Equal variances assumed	.014	.905	3.412	322	.001
	Group	**Mean**	**SD**		**N**	
	RRHH	.1372	1.01640		191	
	RNRHH	-.2507	.99212		133	

Citing the conventional definition of poverty, which is largely viewed in the monetary term: "the poor are those who do not have enough income or consumption to put them above some adequate minimum threshold", it has become necessary to analyze the economic security in terms of monthly income and monthly expenditure separately. For the purpose, t-test was conducted to analyze the descriptive statistics of monthly income and monthly expenses of the two independent samples (the RRHH and the RNRHH). Table below shows the result.

Table 5: Result of t-test: Monthly Income and Expenditure

	Total Monthly Income		Total Monthly Expenditure	
	RRHH	**RNRHH**	**RRHH**	**RNRHH**
Sample Number	191	133	191	133
Mean	33791.10	18402.26	10878.79	10359.10
Standard Deviation	40859.236	13475.828	7110.684	6158.487
*T-statistic	4.841 (df=245.378)		0.683 (df=322)	
P-Value	0.000		0.495	
	*From T-test with Equal Variance not Assumed		*From T-test with Equal Variance Assumed	

The table shows the results of descriptive statistics of total monthly income and expenditure of RRHH and RNRHH. The T-statistic with equal variances not assumed in the case of total monthly income is 4.841. The p-value is .000 and is less than 5 percent level of significance, and that of total monthly expenditure assuming equal variances is .683. The p-value is .495 and is more than 5 percent level of significance. It indicates that there is a significant difference in total monthly income between RRHH and RNRHH. In the case of total monthly expenditure, there is no significant difference in expenditure pattern. Thus, as a result of remittances, there is substantial increase in monthly income of the RRHH compare to the RNRHH. The average monthly household expenditure of the RRHH is nominally higher (about NRS 2000) than that of RNRHH (Table 6). This only nominal differences in household expenditure pattern is due to the loan factor (repayment of loan received for migration purpose) which is not considered in this study.

Expenses in personal consumption (food and other expenditure) are observed dominant for both RRHH and RNRHH. Remaining 33 percent budget of the RRHH and 28.5 percent of the RNRHH spent in human development (education and health). This could be considered as investments for future. This indicated the trend of increase awareness in amongst the RRHH compare to the RNRHH regarding the importance of education and health.

While comparing the income and expenditure pattern of the RRHH and RNRHH, it could be noted that amount of expenditure is higher than the income of the RNRHH. This situation could be explained by the loan amount and its costs (interest) they have acquired for meeting

the household expenses especially, in two VDCs Hatiya and Changunarayan. This is also not discussed in this study.

Table 6: Monthly Income and Expenditure

Income and Sources	RRHH		RNRHH	
1. Monthly Average Income (in NRS)				
	Amount		Amount	
Agriculture Income	3322		3605	
Remittance Income	10551		0.0	
Other Income	8351		4985	
Total Income	22224		8590	
2. Monthly Average Expenditure (in NRS)				
	Amount	(%)	Amount	(%)
Education	2153	20.6	1521	16.9
Health	1275	12.2	1046	11.6
Food	5492	52.5	4911	54.8
Other Expenditure	1526	14.7	1477	16.7
Total Monthly Expenditure	**10,446**	**100.0**	**8,955**	**100.0**

Source: Field Survey, 2012.

Z (Mann-Whitney U) tests were conducted to analyze the difference between RRHH and RNRHH in the human development indicators, and empowerment and social inclusion indicators.

Table 7: Test Statistics

	Human Development	Empowerment and Social inclusion
Z (Mann-Whitney U)	-.494	-.933
Asymp. Sig. (2-tailed)	.622	.351
a. Grouping Variable: Remittance Receiving HH / Remittance not receiving HH		

The test shows that (Table 7) there is no significant difference in gaining human development status, and in gaining empowerment and social inclusion on the average between the RRHH and RNRHH. Because the p-value for these tests is more than 1 percent level of significance. Thus, the indicators associated with this constructs have no influence of remittance. In other words, RRHH and NRRHH both have similar behavior on these indicators.

However, human development is a process of enlarging people's choices essentially, to lead a long and healthy life, to acquire knowledge and to have access to resources needed for a decent standard of living. A long life co-relates closely with good health. The good quality education is necessary for productive life in modern society. Perhaps, after having good health and quality education, it is the attitude and realization that contributes to people's standard of living. The monthly expenditure pattern (Table 6) shows initial trend by RRHH investing comparatively more than RNRHH in the field of gaining quality education and health. It can be hoped that in the long run these investments will benefit changing attitude to realize standard of living if population continuously adopts foreign employment as their occupation.

Table 8: Information Collecting Capacity

(in %)

S.N.	(Morang) Katahiar		(Baglung) Hatiya		(Bhaktapur) Changunarauyan		Total	
	RRHH	RNRHH	RRHH	RNRHH	RRHH	RNRHH	RRHH	RNRHH
Information Acquiring Capacity about								
Family events	75.4	31.9	77.5	62.9	84.7	80.4	79.2	58.4
Business and Occupation related	39.3	25.5	80.3	65.7	66.1	70.6	61.9	53.9
Community Events	62.3	29.8	80.3	71.4	64.4	82.4	69.0	61.2

Source: Field survey, 2012.

Empowerment creates the conditions in which people and other actors capable of making decisions. It requires removal of existing formal and informal institutional barriers that prevents them taking action to improve their wellbeing. This study considered their information acquiring capacity, increase in awareness about the basic rights and participation in human development programmes as the basic factors for empowerment and inclusion. Empowerment process essentially is a changing of internal behavior of people to capacitate them in decision making, which needs continuous action and learning from the experiences and deepened the approach. Since, the data for this research has been collected from the migrant family who has been working in the foreign country for one to three years, it is too early to seek empowerment as an impact (especially, changing of internal behavior of people). But evidence show significant differences in information acquiring capabilities between the RRHH and RNRHH in the selected VDCs. 79.2 percent of the RRHH get relevant information on family events compare to 57.4 percent of the RNRHH (Table 8). This shows that migrant's family had naturally developed the habit of acquiring necessary and timely information compare to non-migrant family.

Integrated testing of socio-economic difference between RRHH and RNRHH was conducted to summarize the results of individual testing. For this purpose also One Sample Kolmogorov-Smirnov test for normality was conducted, which suggested using of parametric test for testing the differences in socio-economic status of the RRHH and RNRHH. T-test was conducted and result is as follows:

Table 9: Independent Samples Test

Levene's Test for Equality of Variances		F	Sig.	t	df	Sig. (2-tailed)
Socio-economic status	Equal variances not assumed	23.18	.000	-2.975	226.98	.003
	Group	**Mean**	**SD**	**N**		
	RRHH	-.14366	.8476	191		
	RNRHH	.20632	1.1575	133		

The test shows there is significant difference in gaining socio-economic status on the average between the RRHH and the RNRHH. Because the p-value for this test is less than 1 percent level of significance. Thus, the indicators associated with these constructs have more influence of remittance. In other words, RRHH and RNRHH both cannot have similar socio-economic status in the community.

However, this depicts that mean is less for RRHH than that for RNRHH. This contradictory result may be due to sampling fluctuation or by chance as the hypotheses for some indicators in the construct socio-economic status are not significant between RRHH and RNRHH, which are shown in table 7. Therefore, it is concluded that there is a vital influence of remittance in the socio- economic status between RRHH and RNRHH. Then,

this situation recommends that the receiving of the remittance may increase the socio-economic status of the household in the study region.

Conclusions

The remittance income earned from foreign employment is helping the households of the study area in fulfilling their basic needs as well as fulfillment of other socio- economic aspect of their life. Therefore, it is clear that the remittance is playing very positive role to the RRHH in increase their socio-economic status compare to respondent RNRHH. It can be hoped that if the RRHH continuously adopts foreign employment as their occupation and invest the remittance earning in seeking good education, better health facilities/services, in the long run these investments will benefit changing attitude to realize standard of living.

Poverty in Nepal is multi-dimensional concept which incorporates (amongst other) income, human development, and empowerment, where human capacity is equally determining factor along with income, for poverty reducing trend. The above analysis is reasonable to suppose that until the developing countries like Nepal reach a certain level of welfare, households will continue to exhibit the same spending patterns. It is therefore hardly surprising to find that remittance-receiving households have consumption patterns similar to households not receiving remittances.

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Annexes

Table 1: Calculation of Sample Size

estimated variability in the population (households receiving remittances) $P=\dfrac{no\ of\ household\ receiving\ remittances}{Total\ no.of\ households\ in\ the\ VDC}$	Katahari VDC	Hatiya VDC	Changu Narayan VDC
Total number of households in the VDC	4895	1723	2750
Number of households receiving remittances	264	113	102
p =	5.3 %	6.5 %	3.7 %
Sample size for: $n = \dfrac{z^2 pq}{e^2}$	97	80	56
Average Sample size of households receiving remittances (RRHH) for the study purpose is estimated as:	78		
Sample size of households not receiving remittances (RNRHH) is estimated at 40 percent of the RRHH	Approximately 32		

Source: DOFE(2012), Researcher's Calculation

Table 2: Indicators for households' poverty monitoring

Areas of poverty	Indicators
I. **Economic security**	1. Food grain sufficiency for less than 6 months from self-production 2. Consumed food ration is nutritionally poor 3. Inadequate clothes, and blankets in cold seasons 4. Lacks jobs for at least one family member for six months or more a year 5. Household owns less than (0.06 hectare in Terai and 0.30 Ha in hills) of agricultural land 6. Lacks regular stable source of income (e.g., from business, livestock, remittance, pension, interest) 7. Family experiencing its income source in a deteriorating trend for the last 3 consecutive years 8. Family is indebted for emergency or welfare borrowing for more than 3 consecutive years 9. Family lives in temporary houses (thatched roof, huts, temporary walls) 10. Family does not have own plot of land for housing 11. Household does not possess modern amenities/appliances (e.g., radio, TV) common in the locality
II. **Human development**	12. Children in the 1-5 age bracket malnourished (growth monitoring result) 13. Children below one year died 14. Children between 1-5 years of age died 15. Children in the HH not fully immunized (immunized less than 5 times) 16. Adults in 15-60 age bracket have chronic disease or severely disabled 17. Pregnant women do not receive regular checkup 18. Malnourished pregnant women 19. Mothers give births without support of skilled health personnel 20. HH unable to purchase medical service in illness 21. Illiterate adults in HH 22. Children in 6-15 age group do not go to school 23. Family does not have a water-sealed toilet 24. HH does not have access to modern energy source (such as electricity, biogas, solar etc) 25. HH consumes unsafe (as defined by Ministry) drinking water
III. **Vulnerability and inclusion**	26. Family member of the HH is living under threats of life (natural calamities, social, political, etc.) 27. HH is not a member of CBOs or civil society organizations 28. Women in the family do not take part in CBO, community, political or administrative affairs 29. HH falls under Dalits caste 30. HH falls under ethnic minority community 31. Female HH head

Table 3: Model Summary for Economic Security Indicators

Dimension	Cronbach's Alpha	Variance Accounted For	
		Total (Eigenvalue)	% of Variance
1	.728	3.199	17.77
2	.558	2.114	11.75
3	.453	1.749	9.72
4	.300	1.396	7.76
5	.184	1.210	6.72
6	.119	1.127	6.26
7	.059	1.059	5.88
8	-.044	.960	5.34
Total	.976[a]	12.814	71.19
a. Total Cronbach's Alpha is based on the total Eigenvalue.			

Table 4: Model Summary for Human Development Indicators

Dimension	Cronbach's Alpha	Variance Accounted For	
		Total (Eigenvalue)	% of variance
1	.871	6.492	18.55
2	.747	3.643	10.41
3	.639	2.635	7.53
4	.571	2.244	6.41
5	.545	2.126	6.07
6	.485	1.892	5.41
7	.460	1.808	5.17
8	.402	1.642	4.69
9	.369	1.558	4.45
10	.335	1.483	4.24
11	.303	1.418	4.05
12	.282	1.378	3.94
13	.265	1.347	3.85
14	.161	1.185	3.39
15	.080	1.084	3.10
Total	.997[a]	31.934	91.24
a. Total Cronbach's Alpha is based on the total Eigenvalue.			

Table 5: Model Summary for Empowerment and Social Inclusion Indicators

Dimension	Cronbach's Alpha	Variance Accounted For	
		Total (Eigenvalue)	% of Variance
1	.827	3.618	35.61
2	.323	1.395	13.73
3	.157	1.160	11.41
4	.096	1.092	10.75
5	-.036	.970	9.54
6	-.426	.729	7.17
7	-.653	.636	6.26
8	-.892	.562	5.53
Total	1.030[a]	10.161	100.00
a. Total Cronbach's Alpha is based on the total Eigenvalue.			