

research Article

Poverty Alleviation Through Capacity Building by the Self-Help Groups: A Study in Kapiri Mposhi District of Zambia

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ABSTRACT

This study aims to know the impact of the Self-help Groups (SHGs) on poverty alleviation through capacity development of its members. The study was conducted in Kapiri Mposhi district of the Central Province in Zambia. Ten SHGs and 320 members were selected randomly. The study used six indicators of capacity development of the members of SHGs, that is, human capital – education and training; natural capital purchase of land, irrigation and soil fertility development; physical capital purchase of equipment, livestock; financial capital – savings; local specific development – access to infrastructure, public services; and social capital participation in any organization, ability to represent social problems. The study concluded that the impact of SHGs on poverty alleviation through capacity development was positive. In all, 44.37% members of SHGs could increase their income above the poverty line through capacity development. The study suggested for the provision of marketing and credit facilities to increase the income of SHGs and to increase the capacity of members to alleviate poverty.

Keywords: Poverty Reduction Programme, Poverty Index, Human Development Index, Self Help Groups

INTRODUCTION

The theme of the Sixth National Development Plan (2011-15) is “sustained economic growth and poverty reduction”. In line with this theme, the Sixth National Development Plan (SNDP) focuses on policies, strategies and programmes that will contribute significantly to addressing the challenges of realising broad-based pro-poor growth, employment creation and human development. The strategic focus of the SNDP is “infrastructure and human development”. The focus is guided by the principles of accountability, decentralization and efficient resource allocation.

Owing to sustained positive growth of the Zambian economy, the per capita income has increased from US\$ 365 at the start of the new millennium to US\$ 680 in 2006 and to US\$ 970 in 2009. The Zambian economy

has recorded impressive growth over recent years but this positive development is yet to translate into broad based wealth and employment creation. The positive growth has not translated into significant reduction in poverty levels. Wealth creation is limited to a minority of the population particularly in the urban areas and income - equalities are rising.

The Government of Zambia has implemented many policies and programmes for poverty eradication, that is, Poverty Reduction Strategy Paper (PRSP, 2002: 04) Transitional National Development Plan (TNDP, 2002:05), The Fifth National Development Plan (FNDP, 2006:10) and the current Sixth National Development Plan (SNDP, 2011–15). However, the poverty trends between 1996 and 2006 show that Zambia has witnessed a 11% rise in the level of extreme poverty, that is, from

53 to 64% respectively. This increase was mostly due to the change in extreme poverty in rural areas, which increased from 68% in 1996 and rose to 80% in 2006 (ZHDR, 2011)

Table 1: Trends in human development index(HDI) in Zambia

Year	1980	1990	1995	2000	2005	2009	2010
HDI	0.382	0.423	0.371	0.345	0.360	0.387	0.395

Source: UNDP, Human Development Report, 2010.

It may be observed that there are very few changes in the human development in Zambia during the last 30 years.

Table 2: Indicators and Multi dimensional poverty Index (MPI) in Zambia during 2004–08

Country/ province	2004				2008			
	Head	Intensityof	MPI	Ranking	Head	Intensityof	MPI	Ranking
	count	poverty			count	poverty		
Zambia	0.563	0.428	0.241	-	0.583	0.440	0.257	-
Central	0.618	0.424	0.262	3	0.634	0.436	0.276	4
Copperbelt	0.351	0.406	0.142	2	0.393	0.413	0.162	2
Eastern	0.652	0.449	0.293	7	0.690	0.450	0.311	6
Luapula	0.720	0.440	0.317	9	0.771	0.471	0.363	9
Lusaka	0.309	0.390	0.121	1	0.298	0.396	0.118	1
Northern	0.651	0.425	0.277	6	0.702	0.452	0.318	8
North Western	0.643	0.423	0.272	5	0.717	0.442	0.317	7
Southern	0.610	0.431	0.263	4	0.600	0.431	0.259	3
Western	0.698	0.439	0.306	8	0.687	0.446	0.307	5

Source: Central Statistical Office (2006), Lusaka, Poverty trends report

The Multidimensional Poverty Index (MPI) identifies multiple deprivations at the individual level in health, education and standard of living. The results of the calculations of MPI for Zambia as shown in Table 2 above indicate that 58.3% of the Zambian population lived in poor households in 2008, whereas, it was 56.3% in 2004. The average poor person was deprived of 44% of the weighted indicators in 2008, whereas, it was 42.8% in 2004. It shows that the poverty situation is stagnant, as measured using MPI. Lusaka province had the least proportion of poor households, followed by the Copperbelt and Southern, whereas, Luapula, Northern and North Western had larger proportion of poor households.

The budget allocations for the poverty reduction programmes have maintained an upward trend between 2006 and 2010. Table 3 shows the break-down of allocation of budget for poverty reduction programmes.

Table 3: Break-down of Budget allocation for Poverty reduction Programmes from 2006 to 2010

Category	2006	2007	2008	2009	2010
Irrigation support	0.7	2.4	2.0	1.0	0.1
Commercialization of Farm blocks	2.2	2.6	2.2	0.0	0.0
Animal disease control	1.5	1.6	3.3	4.2	2.5
Live stock development	0.0	0.9	0.6	0.6	0.4
Fertilizer Support Programme	74.0	38.2	62.2	75.6	78.0
Strategic Food Reserves	18.6	52.1	26.9	17.4	18.1
Co-operative Education and Training	0.3	0.7	0.2	0.0	0.0
Others	2.2	0.7	2.7	0.0	0.9
Total	100.0	99.2	100.0	98.8	100.0
Total ZK in Billion	198.8	196.0	198.2	196.6	199.9

Source: Zambia Human Development report 2011, Final Draft, UNDP, Lusaka.

Table 3 shows that the majority of funds were allocated to the Fertilizer Support Programme, which were given to the Self-help Groups (SHGs) and the Strategic Food Reserves to purchase the produce from the SHGs. The 2010 combined percentage allocation for the two programmes was 96.1.

The 2011 budget has increased the allocation for the Farmer Input Support Programme to K 485 billion from K 435 billion in 2010.

The self-help groups are the voluntary associations of people formed to attain certain collective goals, both economic and social. Poverty eradication is the prime aim of promoting SHGs, which empowers their members through capacity development.

Narayan, et.al. (2000) pointed out that in addition to income and consumption, poor rural households are concerned about food security, health status, vulnerability in general, empowerment and self esteem, participation in community affairs, environmental quality and hopefulness towards the future.

Moser (1998) and Rakodi (1999) found that a household's assets consist of the stock of resources used to generate well being.

Amare, M. and Arya,K. (2008) focused on household assets, that is, natural, physical, human, financial, social and location specific assets, and their combinations

necessary to take advantage of economic opportunities. The study examined the relative contribution of these assets and identified the combination of productive, social and location specific assets that matter most to raise incomes and take advantage of prospectus for poverty reducing and overall economic growth.

Ali Syed (2006) revealed that the formation of women's self-help groups with different activities had a positive impact on income, employment, education, savings, household assets, capacity to cope with difficult times, food security and social empowerment of women. The study found that this impact was higher in rural areas than in urban areas.

There is no denying the fact that the SHG movement can add a new dimension to the fight against poverty and under development in Zambia. There is need for speeding up of the process of people's orientation in the development strategy and fight against poverty through capacity development. The UNDP has defined "capacity" as the ability of individuals, institutions and societies to perform functions, solve problems and set and achieve objectives in a sustainable manner.

The objectives of the study are:

To study the impact of period of functioning of SHGs, their main activity and the nature of marketing on

1. their income.
2. To know the capacity development of members of SHG, that is, human, natural, physical, financial and social capacity development.
3. To find out the impact of capacity development on household income.
4. To investigate the impact of SHGs on poverty alleviation.
5. To ascertain the sources of loan to SHGs.

MATERIALS AND METHODS

This study used the multi-stage random sampling technique. In the first stage the Kapiri Mposhi district, in the second stage SHGs and in the third stage beneficiaries were selected.

Kapiri Mposhi district is one of the six districts in the Central Province of Zambia. Out of 990 registered SHGs in the district as on 30 September 2010, 10 SHGs were

selected for the study. The total number of members of these selected SHGs was 454, out of which 320 were selected for this study. The main activity of three SHGs was agriculture, two SHGs was non-agriculture and the five SHGs was both agriculture and non-agriculture.

The study used "STATA 9" Statistical Package to analyze the data. Multiple Linear Regression model was used to know the impact of period of functioning of SHG, its activity and nature of marketing on income of the SHG and the impact of different types of capacity development on household income of the beneficiaries. The study used six indicators of capacity development of the beneficiaries, that is, (i) human capital, which included education and training; (ii) natural capital, which included purchase of land, irrigation and soil fertility development; (iii) physical capital, which included purchase of equipment, purchase of live-stock, purchase/renovation of house; (iv) financial capital included savings; (v) local specific development included access to infrastructure and public services and (vi) social capital included participation in any organization, ability to represent social problems, and the ability to use public utilities.

The study used Simple Linear Regression Model to know the impact of SHG activity on its income and the impact of human capital development on household income.

For the estimation of the impact of establishment year of SHG on its income, the income for each SHG was converted into categorical values, starting from the lowest income with a value '0' and the highest income with a value '9'.

The descriptive statistical technique was used to know the impact of SHGs on poverty alleviation. The study uses the definition of poverty given by UNDP, that is, \$1.25 (or K 6250) per day.

The agricultural activity of the SHG included the production of maize, groundnut and vegetables. The non-agricultural activity of SHG included trading of maize, goat rearing and selling, and chicken selling.

RESULTS AND DISCUSSION

Impact of the Functioning Period of SHG, its Main Activity and Nature of Marketing on its Income

Table 4 shows that the overall adjusted R square is 0.2496 of the model, which means almost 25% of the variation in the dependent variable (income of SHG) is explained

by the independent variables, that is, period of function of SHG, its main activity and nature of marketing (whether the produce is sold in the local market or in town and whether it is sold by the SHG or by the mediator).

Table 4: Impact of year of establishment, main activity, marketing and nature of selling on income of SHG

Those SHGs which were established earlier have less

Ordered Logistic Regression					
				Number of obs = 320	
				LR $\chi^2(4)$ = 341.29	
				P> χ^2 = 0.0000	
Log likelihood = 512.98835				Pseudo R2 = 0.2496	
Income	Coef.	Std. Err.	z	P> z	[95% CI]
Year	1.060615	0.0978984	10.83	0.000	0.8687378 1.252492
Activity	2.868625	0.3553604	8.07	0.000	2.172131 3.565119
Market	7.763045	0.8759071	8.86	0.000	9.479792 6.046299
Howsell	7.861019	0.7233278	10.87	0.000	9.278715 6.443323

income than those established recently. The reasons for this trend were: (i) The recently established SHGs were involved in both agricultural and non-agricultural activities, whereas, the earlier established SHGs were involved in either agricultural or non-agricultural activities only. (ii) Recently established SHGs sold their product by themselves, without mediators, whereas, the earlier established SHGs sold their product through mediators. (iii) The number of members of the SHGs established recently were more educated than the earlier established SHGs and (iv) The number of members of the SHGs established recently were more trained than the earlier established SHGs.

The SHGs engaged in both agricultural and non-agricultural activities were having more income than those involved in agricultural activity only.

The SHGs selling their goods by themselves without mediators were having higher income than those SHGs who were selling their goods by mediators.

The SHGs selling their goods in both village and city market were having lower income than those selling in the village. The explanation for this trend is higher transport and other selling related costs.

Impact of Main Activity of SHG on its Income

Table 5 shows that the overall adjusted R square is 0.1697 of the simple regression model, which was significant, that is, 17% of the variation in the dependent variable

(Income of SHG) was explained by the independent variable (Main activity of SHG). The 't' value of the independent variable is 8.14 and the 'P' value is highly significant $P>/t=0.0000$. The χ^2 is significant, that is, $P>\chi^2=0.0000$

Table 5: Impact of main activity of SHG on its income

Source	SS	df	MS	Number of obs=320	
Model	1.5861e+16	1	1.5861e+16	F(7,312)=66.20	
Residual	7.6192e+16	318	2.3960e+14	P> F=0.0000	
Total	9.2052e+16	319	2.8857e+14	R ² =0.1723	
				Adj R ² =0.1697	
				Root MSE=1.5e+07	
	Coef.	Std. Err.	t	P> t	[95% CI]
Net income					
Activity	8091612	994513.8	8.14	0.000	6134954 1.00e+07
Cons	419726.4	2425243	0.17	0.863	5191275 -4351822

As the SHG's activity was increasing from agriculture to non-agriculture and to both agricultural and non-agricultural activities, the income of the SHG was higher. In other words, the SHGs, which were involved in agriculture, their income level was lower than those SHGs, which were involved in non-agricultural activity. The SHGs, which were involved in both the activities had higher income than those engaged only in agricultural or only in non-agricultural activities.

Impact of Capacity Development on Household Income

Table 6 shows that the sample members of SHGs could develop their capacity with respect to all the indicators. The human capital development was the highest (72%) and the financial capital development was the lowest (6%). The natural, physical, local specific development and the social capital development were 35, 64, 15 and 53%, respectively.

Table 6: Indicators of capacity development (Proportion)

HCD		NCD		PCD	
No HCD	28%	No NCD	65%	No PCD	36%
Education only	7%	Purchase of Land	5%	Purchase of Equipment	7%
Training only	64%	Irrigation Development	14%	Purchase of live stock	12%
Education and training	1%	Soil Fertility Development	11%	Purchase of TV and Rd	35%
		All Developments	5%	Purchase of Bicycle	1%
				All the above	4%
				Renovation of House	4%
				Purchase of car	1%

FAD		LSD		SCD	
No FAD	94%	No LSD	85%	No SCD	47%
Transfers	1%	Access to Infra-structure	2%	Participate in org. Ability to rep. soc. Problems, Ability to use pub. utilities	53%
Credit	1%	Public services	12%		
Savings	4%	All	1%		
Others	0				

HCD= Human Capital Development; NCD= Natural Capital Development; PCD= Physical Capital Development FAD= Financial Assets Development; LSD= Local Specific Development; SCD= Social Capital Development

Table 7 shows that the overall R² (adjusted) is 0.1007 of the model, that means 10% of variation in the dependent variable (household income) was explained by the independent variables. The χ^2 was significant, that is, $P > \chi^2 = 0.0000$.

Table 7: Impact of capacity development on household income

Source	SS	df	MS	Number of obs=320	
Model	8.9106e+14	7	1.2729e+14	F(7, 312)=6.10	
Residual	6.5084e+15	312	2.0860e+13	P > F=0.0000	
Total	7.3995e+15	319	2.3196e+13	R ² =0.1204	
				Adj R ² = 0.1007	
				Root MSE=4.6e+06	
Income	Coef.	Std. Err.	t	p> t	[95% CI]
HCD	20119.84	282262.8	0.07	0.943	575499.1 535259.5
NCD	430506.9	226341.1	1.90	0.058	14841.07 875854.9
PCD	209838.5	157239.9	1.33	0.183	99546.09 519223.2
FAD	2030962	423921.6	4.79	0.000	1196856 2865069
LSD	232343.2	391738.9	0.59	0.554	538440.8 1003127
SCD	117422.3	136046.9	0.86	0.389	385107.7 150263.2
training	1495178	795878.8	1.88	0.061	70790.36 3061146
Cons	1952313	628103.9	3.11	0.002	716457.9 3188168

The human capital development and the social capital development showed a negative relationship with the household income when they are combined with the natural capital development, physical capital development, financial capital development, local capital development and training.

The determinants of natural capital development like purchase of land, irrigation and soil fertility development had a positive impact on the household income.

The determinants of physical capital development, that is, purchase of equipment, live stock had positive impact on household income.

The determinants of financial capital development, that is, savings had a positive impact on household income.

The determinants of local capital development, that is, access to infrastructure, and public services had a positive impact on household income.

Impact of Human Capital Development on Household Income

Table 8 shows that when a simple regression was conducted for household income as dependent variable and human capital development as independent variable, the result showed a positive relationship between the two variables, as expected by the researcher.

Table 8: Impact of human capital development on household income

Source	SS	df	MS	Number of obs=320	
Model	2.3654e+13	1	2.3654e+13	F(1, 312)=1.02	
Residual	7.3758e+15	318	2.3194e+13	P > F=0.3133	
Total	7.3995e+15	319	2.3196e+13	R ² =0.0032	
				Adj R ² =0.0001	
				Root MSE=4.8e+06	
Income	Coef.	Std. Err.	T	P> t	[95% CI]
HCD	288625.8	285805.3	1.01	0.313	273682.5 850934.1
cons	2564222	479310.1	5.35	0.000	1621202 3507242

Impact of Education, Activity of SHG and Marital Status on Household Income

Table 9 shows that without considering training of the members, education, activity of SHG and the marital status in the regression model, education was a significant variable for higher household income.

Table 9: Impact of marital status, education and main activity of SHG on household income

Regress HH income marital edu SHG					
				Number of obs=320	
				F(3, 316)=7.40	
				P>F=0.0001	
				R ² =0.0657	
				Adj R ² =0.0568	
HH income	Coef.	Std. Err.	t	P> t	[95% CI]
Marital	379580.7	409423.9	0.93	0.355	425960.6 1185122
edu	2282218	488472.6	4.67	0.000	1321149 3243288
SHG	35122.58	122489.2	0.29	0.774	205874.8 276120
cons	94194.83	1186186	0.08	0.937	2428015 2239625

Since training could have more impact on educated members than illiterate, in absence of training education was significant in the determination of household income.

Impact of Training, Activity of SHG and Marital Status on Household Income

Table 10 shows that the regression results for the whole observation showed that the training was a significant variable 't' value of 1.95 and $P > |t|$ was 0.052.

Table 10: Impact of marital status, training and main activity of SHG on household income

Regress HH income marital training SHG					
					Number of obs=320
					F(3, 316)=1.39
					$P > F=0.2446$
					$R^2=0.0131$
					Adj $R^2=0.0037$
HH income	Coef.	Std. Err.	t	$P > t $	[95% CI]
Marital	177157.7	417974.5	0.42	0.672	645206.9 999522.3
Training	660738.6	338077.5	1.95	0.052	4428.797 1325906
SHG	59923.62	125746.5	0.48	0.634	187482.6 307329.9
cons	2885705	996784.8	2.90	0.004	924531.2 4846878

Other variables considered for this regression like marital status and the nature of activity of SHG had no role in determining household income.

Poverty Alleviation Through Becoming a Member of SHG

Table 11 shows that the percentage of members of the sample SHGs whose household income was above \$1.25 (K. 6250) per day was 44.37. The total sample members were 320, out of which, 142 members' household income was above the poverty level.

Table 11: Poverty alleviation through becoming members of SHGs

Total Sample Members	No. of members whose	Percentage
	Income was above \$1.25	
	(K. 6250) per day	
320	142	44.37

Sources : Primary Data

Table 12: Sources of loan to the sample members

SL.No	Sources of Loan	Number of Sample Members	Percentage
1.	Organized Financial Institutions		
	(a) Bank	01	0.31
	(b) Co-operative Society	07	2.18
	Total (a+b)	08	2.49
2.	Unorganized Sources		
	(c) Money Lender	03	0.93
	(d) Relatives/Friends	08	2.50
	Total (c+d)	11	3.43
3.	No source of loan	301	94.08
	Grand Total	320	100.00

Source: Primary data

Table 12 shows the sources of loan to the members of SHGs. The loan from organized and un-organized sources was available to only 2.5 and 3.4% sample members, respectively. There was no loan facility to 94.1% sample members.

CONCLUSIONS AND SUGGESTIONS

Conclusions

- Those SHGs which were established earlier had less income and the latest established had a higher income. The SHGs engaged in both agricultural and non-agricultural activities had more income, whereas, the SHGs involved in only agricultural activity had lower income. The SHGs selling their goods by themselves without mediators had a higher income than those SHGs who sold through mediators. The SHGs selling their goods in both village and city markets had lower income than those selling in the village due to higher selling costs in city market.
- As the SHG's activity was increasing from agriculture to non-agriculture and to agriculture and non-agriculture activities, the income of the SHG was higher.
- The overall impact of the capacity development of members on household income was statistically significant. The human capital development and social capital development showed negative relationship with the household income when they were combined with the other indicators of capacity development. The natural, physical, financial and local capital development had a positive impact on the household income.

There was a positive relationship between human capital development and household income, when the simple regression was run though it was not statistically significant.

Without considering education, training was a significant variable for higher household income.

4. The impact of SHGs on poverty alleviation through capacity development was positive. In all, 44.37% members of SHGs could increase their income above poverty line through capacity development.
5. The organized sources of loan, that is, bank and co-operatives, were available to only 2.5% members. The unorganized sources of loan, that is, money lenders and relatives/friends, were available to only 3.4% members. Whereas, 94.1% members did not have any source of loan.

Suggestions

1. The SHGs should be encouraged to take up both agricultural and non-agricultural activities, as it leads to a higher income. The SHGs should sell their products by themselves without mediators, as it resulted in higher income for them. There is need to provide transport and other marketing facilities to the SHGs to sell their goods in the city market, as the selling costs were more and the SHGs selling in the city market were getting less income than selling in the village market. Actually, the price of the goods in the city market was higher than the village market. However, due to higher selling costs, the SHGs were getting lower income.
2. Since the impact of capacity development on household income was positive, there is need to increase different indicators of capacity development of members of SHGs.
3. Since the impact of SHGs on poverty alleviation through capacity development was positive, people should be encouraged to form SHGs for eradication of poverty from Zambia.
4. There is need for establishment of bank branches in the rural areas to provide credit facilities. Moreover, there is need for formation of micro finance institutions in the rural areas.

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