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# Change in income of SHG members: Enterprise and efficiency

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#### Abstract

Microfinance has become an important tool to curb poverty in case of rural women. Micro-credit is given to SHG members. With the help of the credit women start their micro-enterprise and generate income, in some cases women invest the money to gain income. After joining SHGs the income level of the SHG members is increased due to constant income from micro-enterprises. In our present study we identified the relationship among and between some exogenous variables and change in income of SHG members after joining SHGs. The study was conducted in Pandurangapuram village, under Nandyal Mandal and Gopavaram village, under Mahanandi mandal of Kurnool district of Andhra Pradesh. The number of respondents was 80 and they were selected randomly. The data were collected through pilot survey and structured interview. The statistical tools used for data analysis are Correlation coefficient, Stepwise regression analysis, Canonical covariate analysis, Factor analysis and Cluster analysis. In correlation coefficient analysis, variables such as Age(x1), Marital status(x2), Experience in SHG(x6) are negatively significant correlation whearas Education  $(x_3)$ , Extension contacts $(x_7)$ , No. of trainings attended  $(x_8)$ , Mass media exposure  $(x_9)$  Market facilities  $(x_{10})$  have recorded positive significant correlation with the dependent variable. Regression results found that 11 casual variables together have contributed 30.7 percent of variance in consequent variable i.e. change in income (y1). The variables which were retained after step down regression are Education( $x_3$ ), Distance from market ( $x_{10}$ ) which means these are the most vital causal variables that affects the consequent variable. The result of path analysis envies that the variable marital status (x<sub>2</sub>) has got both highest direct and indirect effect on Change in income of SHG group members  $(y_1)$ .

Keywords: SHG, enterprise, income, empowerment

#### 1. Introduction

The biggest economic problem in India over the decades has been the poverty on a mass scale. Solution of the problem is employment and income generation<sup>[1]</sup>. Over the years, India's most serious economic concern has been widespread poverty. The problem can be solved by creating jobs and earning money, but the impoverished lack the financial resources to do so. The provision of financial resources could thus be a viable option for reducing the rural poor's vulnerability. Nobody can deny that commercial banking institutions are unable to provide rural lending to the desired extent and on favourable terms. Former financial institutions were scared of providing rural credit due to their pre-conception that serving the rural poor is both costly and risky. This is primarily because of scattered nature of agricultural borrowers with the demand for credit in low volume <sup>[1]</sup>. The concept of a self-help group is not new in India. However, there are a number of constructive activities that can be carried out to improve the economic situations of concerned members and hence raise their social status. SHGs emerged as a valuable instrument for inclusion of socially and financially poorer and feeble women into the mainstream of nation's growth and progress <sup>[2]</sup>. SHGs have emerged as important institutions for accelerating rural development in recent years. This has been especially true for low-income women. Poor women lack the financial resources to start a business on their own. For any endeavour, the group approach makes available collective wisdom and united resources. To make ends meet, SHG members often engage in a variety of income-generating activities. This paper tries to focus on the factors which needs to be emphasised to increase the income of the SHG members.

#### 2. Methodology

The present study entitled Change in income of Self Help Group members was conducted in Pandurangapuram village, under Nandyal mandal and Gopavaram village, under Mahanandi mandal of Kurnool district of Andhra Pradesh.

Eighty (80) respondents in total were selected from two villages, forty (40) from each village to conduct the study following random sampling method. Appropriate statistical tools have been used to carry out the study viz, Correlation coefficient, Step wise regression analysis, canonical covariate analysis, Factor analysis, Cluster analysis. Appropriate operationalization and measurement of the variables have helped the researcher to land upon the accurate conclusions. Therefore, the selected variables for this study had been operationalized and measured in the following manner: 1) Independent variables 2) Dependent variables. Independent variables selected for the study were Age  $(x_1)$ , Marital status  $(x_2)$ , Education  $(x_3)$ , Family Size  $(x_4)$ , Annual income  $(x_5)$ , Experience in SHG  $(x_6)$ , Extension contacts  $(x_7)$ , Number of trainings attended (x<sub>8</sub>), Mass media exposure (x<sub>9</sub>), Distance from market  $(x_{10})$  and Land holding  $(x_{11})$ . Dependent variable selected for the study was - Change in income (Difference in income before and after joining SHG).

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#### 3. Results and Discussion

The results of the evaluation are discussed below:

<b>Table 1:</b> Coefficient of correlation between Change in income (Y2)
and eleven independent variables(X1-X11)

S. No. Independent variables		r value	Remarks	
1 Age(X1)		-0.245	*	
2	2 Marital status(X2)		*	
3	3 Education(X3)		**	
4	4 Family size(X4)			
5	5 Annual income(X5)			
6	6 Experience in SHG(X6)		**	
7	7 Extension contacts(X7)		*	
8	No of training attended(X8)	0.232	*	
9	9 Mass media exposure(X9)		**	
10	10 Distance from market(X10)		**	
11	Land holding(X11)	0.106		

\*\*Correlation is significant at the 0.01 level \* Correlation is significant at the 0.05 level

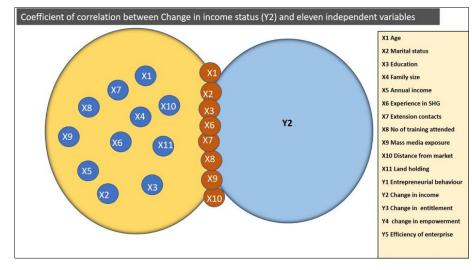


Fig 1: Coefficient of correlation between Change in income (Y2) and eleven independent variables(X1-X11)

Table 1 presents the coefficient of correlation between Y2 (Change in income) and 11 dependent variables. It has been found that the following variables viz. Age (X1), marital status (X2) and Experience in SHG are having negative but significant correlation with the dependent variable. The variables Education (X3), Extension contacts (X7), No. of trainings attended (X8), Mass media exposure (X9) and Market facilities (X10) have recorded positive and significant correlation with the dependent variable. The correlation coefficients suggests that younger respondents and those are new to the SHG have recorded higher Change in income than that of the older respondents this is because the younger respondents are having higher and better entrepreneurial behaviour, at the same time respondents having higher education, better extension contacts and more no of trainings attended, wider mass media exposure have recorded increase in income after joining SHGs and starting their micro

enterprise.

Table 2: I	Regression analysis, Change in income (Y2) vs.
	independent variables (X1-X11)

S. No	Variables	Reg. coef. B	S.E. B	Beta	t value
1	Age(X1)	165.664	148.728	.423	1.114
2	Marital status(X2)	-157.765	129.748	462	-1.216
3	Education(X3)	73.465	194.733	.075	.377
4	Family size(X4)	291.122	290.337	.109	1.003
5	Annual income(X5)	.165	.129	.142	1.272
6	Experience in SHG(X6)	26.678	105.196	.035	.254
7	Extension contacts(X7)	-151.252	372.419	062	406
8	No of training attended(X8)	201.701	164.709	.133	1.225
9	Mass media exposure(X9)	442.816	410.186	.211	1.080
10	Distance from market(X10)	515.223	183.845	.323	2.802
11	Land holding(X11)	20.739	185.378	.012	.112

R square - 30.7%

Standard error of the estimate: 3277.31

Table 3: Step down regression analysis, Change in income (Y2) vs. independent variables(X1-X11)

S. No.	Variables	Reg. coef. B	S.E. B	Beta	t value	
1	Distance from market(X10)	521.871	175.428	.327	2.975	
2	Education(X3)	236.309	108.287	.240	2.182	
R square – 23%						

Standard error of the estimate: 3247.23.

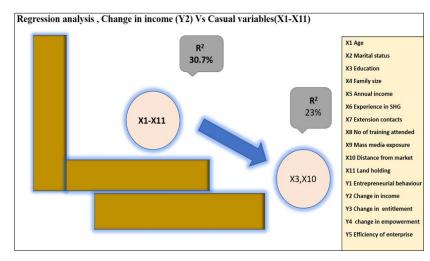


Fig 2: Regression analysis, Change in income (Y2) vs. independent variables(X1-X11)

Table 2 presents the full model of regression analysis between exogenous variable Change in income (Y2) vs 11 causal variables. It is found that 11 causal variables together have contributed 30.7 percent of variance in consequent variable Change in income (Y2).

Table 3 represents step down regression analysis, in stepwise regression analysis it is found that the variable Education (X3) and market facilities(X10) has been retained in the last step which has explained 23% of variability in the consequent variable Change in income(Y2). In order to scale up income of the SHG members, the prime concerns could be education and Distance from market. The table 4 envises that the variable marital status (X2) has got highest indirect and direct

effect on Change in income (Y2). It is also interesting to note that marital status (X2) and Age (X1) has enrooted the highest indirect effects to ultimately characterize the dependent variable Entrepreneurial behaviour.

So the role of marital status and age, either in providing time after Enterprise or family considering number of kids to sustain by her, has got tremendous cohesive effect on entrepreneurial behaviour. The residual effect been 69.3 percent, it is to conclude that even with the combination of 11 exogenous variables, 69.3 percent variance in dependent variable could not be explained. This suggests the inclusion of more numbers of relevant and consistent variables for this framework of study.

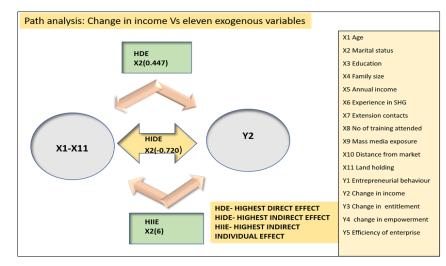


Fig 3: Path analysis: change in income vs consequent variables (X1-X11)

 Table 4: Path analysis: Decomposition of total effects into direct, indirect and residual effect (change in income vs consequent variables (X1-X11)

S. No.	Variables	Total effect	Direct effects	Indirect effects	Highest indirect effects
1	Age(X1)	-0.245	0.408	-0.653	-0.430(X2)
2	Marital status(X2)	-0.273	0.447	-0.72	0.392(X1)
3	Education(X3)	0.376	0.075	0.301	0.276(X2)
4	Family size(X4)	0.183	0.109	0.074	-0.093(X1)
5	Annual income(X5)	0.146	0.142	0.004	0.038(X1)
6	Experience in SHG(X6)	-0.227	0.035	-0.262	-0.290(X2)
7	Extension contacts(X7)	0.267	-0.061	0.328	0.214(X2)
8	No of training attended(X8)	0.232	0.133	0.099	0.106(X2)
9	Mass media exposure(X9)	0.348	0.209	0.139	-0.239(X1)
10	Distance from market(X10)	0.427	0.323	0.104	-0.082(X2)
11	Land holding(X11)	0.106	0.012	0.094	-0.072(X1)

Residual effect: 69.3%

# 4. Conclusions

Income is one of the important factors measuring the socio economic status of any individual. In this study we have highlighted the variables such as Education and distance from market which are the major contributing factors in change in income in SHG households. Further path analysis depicted that the direct and indirect effects of the variables like marital status on the income of the SHG members. Trainings and awareness about new technologies and skills should be imparted in the SHG members, so that they can increase the productivity from the enterprise leading to increase in income. Regular meetings and discussions are essential for improving the efficiency of enterprise and empowering the SHG members.

# 5. Acknowledgement

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