

**RESEARCH ARTICLE**

**Factors influencing the involvement in non-agricultural income generating activities of rural youth: A case study in Jabalpur district of Madhya Pradesh, India**

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**Abstract:** Many rural youth are faced with difficulty of maintaining livelihoods and consequently, poverty remains pervasive among them. The importance of income generating activities to rural livelihood cannot be over-emphasized. The paper examined the involvement of rural youth in non-agricultural income generating activities as well as factors influencing their involvement in Jabalpur district of Madhya Pradesh, India. Multi stage random sampling was used to collect data from 247 respondents. Respondents participated in number of non-agricultural income generating activities with petty trade being the most common. Majority of respondents were married, educated up to high school had low achievement motivation and medium economic motivation. There were significant influences of socio-economic and psychological characteristics of respondents on their involvement in non-agricultural income generating activities ( $R^2=0.582$ ). Marital status ( $t=4.284$ ), family occupation ( $t=3.668$ ), respondents' education ( $t=4.705$ ), employment status ( $t=3.607$ ), rural life preference ( $t=3.102$ ), achievement motivation ( $t=5.853$ ), economic motivation ( $t=5.358$ ), fatalism-scientism ( $t=5.197$ ), mass media exposure ( $t=6.998$ ) and extension contact ( $t=4.698$ ) were predictors of involvement in non-agricultural income generating activities engaged by rural youth at 1 percent significant level while 1/3 of the total accountable variation was explained by achievement motivation. Governmental and non-governmental organizations should take all income generating activities engaged in by rural youth as well as the identified factors influencing them into consideration when initiating and embarking on programmes targeted at improving their livelihoods.

**Keywords:** rural youth, non-agricultural, Income activities, livelihoods

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**Introduction**

Rapid population growth which brought about reduction of cultivable land, erosion, loss of soil fertility and biodiversity have resulted in decreasing agricultural productivity and negative effect on people's income as well as accelerated rural poverty (Sheheli, 2012). According to IFAD (2001), poverty remains predominantly a rural phenomenon despite rapid urbanization observed in most developing and transition countries. There are over one billion youth (aged 15-24) in the world, 85 percent of these youth live in the developing countries and about 50 percent of youth population in developing countries live in rural areas (United Nations, 2007). They constitute a reasonable force propelling rural economy, nonetheless, poverty is still pervasive among rural

youth who face numerous challenges in order to achieve and maintain their livelihoods. ILO (2004) reported that youth have difficulties in accessing livelihood opportunities globally. In societies governed by principles of age and where control of resources is in the hands of older people, young people have little opportunities to express their interests and needs. This explains why youth issues have not received much needed attention in development policies. Despite the fact that burning problems on present day relates to rural youth globally, not much have been done to collect information about them in many countries and knowledge about their livelihoods remain fragmented among service providers (Waldie, 2004).

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Rural households world-wide engage in variety of non-farm activities to generate income (World Bank, 2003; Lanjouw and Lanjouw, 2001; and Meludu et al., 1999). The contribution of non-farm income to rural income shares cannot be underestimated. For Latin America and Caribbean, estimates of rural non-farm income shares for rural households were 22% in Honduras, 59% in Costa Rica and 68% in Haiti (Reardon, 1997). Recent data for Eastern Europe indicated 31% in Armenia and 68% in Bulgaria (Davis, 2004). Mukherjee (2002) found that intensive farming with increased mechanization of agriculture has led to a fall in farm employment in India. In another report by Hiremath (2007) reveals that land based livelihood of a small and marginal farmer is increasingly becoming unsustainable in India, since his lands is not supporting their family’s food requirement and fodder for their cattle. According to CTA (2010), low level of production and entrepreneurship as well as decreasing involvement of youth in agriculture brought about low level of agricultural skills and limited access to financial resources. Consequently, rural households are forced to look at alternative non-agricultural income generating activities for their survival. Micevska and Rahut (2008), reported that the rural poor engage in non-farm activities, both as a compliment to their farm activities and as a substitute for their farm incomes. Concomitantly, there has been increasing involvement of youth in rural non-farm income generating activities like craft work, trade and employment in both unorganized and organized non-agricultural private sectors (Reardon *et al.*, 1998).

Living standard of the rural poor would only be uplifted when they receive income from economic

activities (Ahmed et al., 2007; Al-amin, 2008; and Ahmed, 2009). Undoubtedly, the plight of rural youth would be alleviated through their involvement in income generating activities. Understanding income generating activities pursued by rural youth is highly imperative in developing policies and services aimed at reducing rural poverty.

### Materials and methods

**Description of the study area:** Jabalpur is located on 23° 10’ N latitude and 79° 57’ E longitude. According to 2011 census, Jabalpur district had a population of 2,460,714 people. The area of the district is 10,160 km<sup>2</sup> while the administrative headquarters is located in Jabalpur city (Wikipedia, 2013).

**Sampling procedure and sample size:** Multi-stage and simple random sampling were used to compose the sample. In the first stage two out of the seven blocks in the district, Panagar and Patan, were randomly selected. The second stage involved delineation of rural villages in the two blocks selected. Five rural villages were randomly selected from each of the two blocks Panagar and Patan making the total rural villages selected to be ten. Twenty percent of total households in the ten rural villages were selected and one youth from each household was interviewed bringing the sample size to two hundred and forty seven (247).

**Method of data collection:** Interview schedule was used to collect data on socio-economic and psychological characteristics as well as non-agricultural income generating activities.

Table 1. Villages and rural youth sample sizes in the study area

S. No.	Villages	Total households	20% of total households	No. of youth selected
1.	Belkhadu	13	3	3
2.	Padariya	381	76	76
3.	Pipariya	87	17	17
4.	Pondi	67	13	13
5.	Umaliya	115	23	23
6.	Benikheda	223	45	45
7.	Doni	60	12	12
8.	Luhari	89	18	18
9.	Nimi	44	9	9
10.	Timri	157	31	31
	<b>Total</b>	<b>1236</b>	<b>247</b>	<b>247</b>

**Measurement of variables:** The dependent variable for the study which involves non-agricultural income generating activities was measured using a 3 point likert scale of fully involved, partially involved and not involved (2, 1, 0). The cumulative scores obtained for variables were categorized as low, medium and high using the formula; Low < (X - 0.425SD), Medium (X ± 0.425 SD) and High > (X + 0.425 SD). Multiple regression analyses were used to determine factors influencing involvement in non-agricultural income generating activities among rural youth. The model is expressed as:  $Y = a + b_1X_1 + \dots + b_nX_n + e$ , Where Y= Extent of involvement in non-agricultural income generating activities, a = constant term,  $b_1, b_2, \dots, b_n$ = Regression coefficients, e = error,  $X_1, X_2, \dots, X_n$ =Regression parameters, which are;  $X_1$ = Marital status (married=3, unmarried=1),  $X_2$ = Family occupation (farming=1, trading=2, civil service=3, wage labour=4),  $X_3$ =Respondents' education (in standards),  $X_4$ = Employment status (schooling=1, receiving training=2, looking for employment=3, currently employed=4),  $X_5$ = Rural life preference (Total scores),  $X_6$ = Achievement motivation (Total scores),  $X_7$ = Economic motivation (Total scores),  $X_8$ =Fatalism-scienticism (Total scores),  $X_9$ = Mass media exposure (Total scores) and  $X_{10}$ =Extension contact (Total scores).

### Results and Discussion

Majority of the rural youth (72.10%) were married and from farming households (59.50%). Similar

finding was reported by NSSO (2011) that highest proportion of rural youth in India were married and belonged to households that were self-employed in agriculture. In addition, majority of respondents were educated up to high school (42.50%), currently employed (59.50%), had medium (48.98%) rural life preference and low (35.63) achievement motivation. The economic motivation of majority of the respondents was categorized as medium (49.80%). This finding agrees with that of Shivalingaiah (1995) who reported that majorities of small and big farm rural youth have medium economic motivation. The findings revealed that majorities of respondents were fatalistic, had high mass media exposure and low extension contact (Table 2). The most participated non-agricultural income generating activities were petty trading (ranked first), hired labour (ranked second) and construction work ranked third (Table 3), These findings support the views of Okoye (1995); CPD (2004); Oladeji (2007); Sheheli (2012) and Ovwigbo (2014) that even though farming is the predominant activity in most rural areas, rural dwellers usually engage in non-agricultural income generating activities. Majority (41.70%) of rural youth had low involvement in non-agricultural income generating activities (Table 4). This finding is in conformity with the report of NSSO (2011) that majority of rural youth in India belong to households that are self-employed in agriculture. It could be said that rural youth had medium to low involvement in non-agricultural income generating activities.

Table 2. Frequency distribution and categorization of respondents' socio-economic and psychological characteristics

Variables	Frequency	Percentage
<b>Marital Status ( Mean =2.44, SD =0.899)</b>		
Unmarried	69	27.90
Married	178	72.10
Total	247	100.00
<b>Family occupation ( Mean =1.78, SD =1.087)</b>		
Farming	147	59.50
Trading	40	16.20
Civil service	28	11.30
Wage labour	32	13.00
Total	247	100.00
<b>Respondents' educational attainment (Mean=10.33, SD =4.128)</b>		
Illiterate	-	-
Functionally literate	12	4.90
Primary school	28	11.30
Middle school	44	17.80
High school	105	42.50
Graduated and above	58	23.50
Total	247	100.00

Table 2 continued. Frequency distribution and categorization of respondents' socio-economic and psychological characteristics

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Employment status ( Mean =3.19, SD =1.165)</b>		
Schooling	48	19.40
Receiving training/Apprentice	4	1.60
Looking for employment	48	19.40
Currently employed	147	59.50
Total	247	100.00
<b>Rural life preference (Mean =5.904, SD =2.356)</b>		
Low (1 – 3.5)	36	14.58
Medium (4 – 6.5)	121	48.98
High (7 and above)	90	36.44
Total	247	100.00
<b>Achievement motivation ( Mean =12.60, SD =2.424)</b>		
Low < (X – 0.425SD)	88	35.63
Medium (X ± 0.425SD)	74	29.96
High > (X + 0.425SD)	85	34.41
Total	247	100.00
<b>Economic motivation ( Mean =30.43, SD =5.939)</b>		
Low < (X – 0.425SD)	52	21.05
Medium (X ± 0.425SD)	123	49.80
High > (X + 0.425SD)	72	29.15
Total	247	100.00
<b>Fatalism-scienticism ( Mean =14.28, SD =4.189)</b>		
Fatalism (Above mean score)	139	56.28
Scienticism (Below mean score)	108	43.72
Total	247	100.00
<b>Mass media exposure ( Mean =11.62, SD =2.982)</b>		
Low < (X – 0.425SD)	68	27.53
Medium (X ± 0.425SD)	76	30.77
High > (X + 0.425SD)	103	41.70
Total	247	100.00
<b>Extension contact ( Mean =3.23, SD =3.144)</b>		
Low < (X – 0.425SD)	96	38.87
Medium (X ± 0.425SD)	72	29.15
High > (X + 0.425SD)	79	31.98
Total	247	100.00

To identify the occurrence of multicollinearity, the correlation matrix of the explanatory variables is studied. The results of this multiple regression analysis show the best in the sense of involving no multicollinearity, that is ensuring no two independent variables has a correlation in excess of 0.80. Through backward elimination and forward selection, ten explanatory variables were selected and their effect on non-agricultural income generating activities determined. The value of R-square of 0.582 indicated that 58.2 percent of the variation in involvement in

non-agricultural income generating activities could be accounted for by the combined effect of these ten variables and the other 41.8 percent remained unexplained. The adjusted R-square for the model was 0.565, which indicated only a slight overestimation. The regression model was well fitted since F-ratio (32.892) at 1 percent significant level was found to be highly substantial statistically. The significant variables influencing involvement in non-agricultural income generating activities among rural youth shown in table 5 are discussed.

Table 3. Ranking by mean the extent of involvement in non- agricultural income generating activities

<b>S. No.</b>	<b>Non-agricultural income generating activities</b>	<b>Mean</b>	<b>Rank</b>
1.	Petty trading	0.78	1 <sup>st</sup>
2.	Blacksmith	0.16	9 <sup>th</sup>
3.	Craft work	0.06	15 <sup>th</sup>
4.	Carpentry	0.11	11 <sup>th</sup>
5.	Pottery	0.00	17 <sup>th</sup>
6.	Shoe repair/Shoe shining	0.03	16 <sup>th</sup>
7.	Barbing	0.11	11 <sup>th</sup>
8.	Motorcycle/bicycle repair	0.06	15 <sup>th</sup>
9.	Tailoring	0.18	8 <sup>th</sup>
10.	Selling traditional medicine	0.15	10 <sup>th</sup>
11.	Teaching/Civil service	0.40	4 <sup>th</sup>
12.	Health work	0.11	13 <sup>th</sup>
13.	Local party agent/Council member	0.19	7 <sup>th</sup>
14.	Rental services	0.32	6 <sup>th</sup>
15.	Hired labour	0.55	2 <sup>nd</sup>
16.	Transportation	0.36	5 <sup>th</sup>
17.	Construction work	0.53	3 <sup>rd</sup>

Table 4. Categorization of respondents according to extent of involvement in non-agricultural income generating activities

<b>Categories</b>	<b>Frequencies</b>	<b>Percentages</b>
Low < (X - 0.425SD)	103	41.70
Medium (X ± 0.425SD)	96	38.87
High > (X + 0.425SD)	48	19.43
Total	247	100.00

Mean = 4.11 and Standard deviation = 3.680

Table 5. Regression coefficients of involvement in non-agricultural income generating activities with selected variables of rural youth

<b>Variables</b>	<b>Coefficient</b>	<b>t- statistics</b>	<b>Significant level</b>
Intercept	-7.622	-3.969	0.000
Marital status	0.756	4.284	0.000
Family's occupation	0.541	3.668	0.000
Respondents' education	-0.200	-4.705	0.000
Employment status	0.610	3.607	0.000
Rural life preference	0.226	3.102	0.002
Achievement motivation	0.430	5.853	0.000
Economic motivation	0.174	5.358	0.000
Fatalism – scienticism	-0.235	-5.197	0.000
Mass media exposure	0.408	6.998	0.000
Extension contact	-0.291	-4.698	0.000

$R^2 = 0.582$ , Adjusted  $R^2 = 0.565$ , F-ratio = 32.892, F-probability = 0.000

Table 6. Stepwise multiple regression analysis showing contributions of ten variables to involvement in non-agricultural income generating activities

Model	Dimension entered	Multiple R	Change in R <sup>2</sup>	Variation expressed in (%)	Significant level
1.	Achievement motivation	0.455	0.207	20.7	0.000
2.	Economic motivation	0.568	0.115	11.5	0.000
3.	Mass media exposure	0.616	0.057	5.7	0.000
4.	Fatalism- scienticism	0.652	0.046	4.6	0.000
5.	Respondents' education	0.678	0.035	3.5	0.000
6.	Marital status	0.703	0.035	3.5	0.000
7.	Family occupation	0.721	0.026	2.6	0.000
8.	Rural life preference	0.733	0.017	1.7	0.030
9.	Extension contact	0.748	0.022	2.2	0.001
10.	Employment status	0.763	0.023	2.3	0.000

**Marital status:** There is a significant positive effect of marital status on rural youth involvement in non-agricultural income generating activities. This implies that married rural youth were more involved in non-agricultural income generating activities than unmarried rural youth. A change from unmarried to married status resulted in 0.756 increase in involvement in non-agricultural income generating activities. Greater responsibilities associated with marriage could be the possible explanation for the finding.

**Family occupation:** There is a positive and significant influence of family occupation on non-agricultural income generating activities. As the family occupation moved out of farming, there was increased involvement of rural youth in non-agricultural income generating activities like trade, civil service and wage labour. In their study in India, Lanjouw and Shariff (2002) found that the importance of rural non-farm activities by income level varies by state and for those states with a high share of income from rural non-farm activities, the shares are greater for better-off households; for those states with a lower share of income from rural non-farm activities, the opposite was true. The share of income from casual wage employment is highest among the poor, while the share from regular wage employment is highest among the rich (Carletto et al., 2007).

**Respondents' education:** There is a significant negative influence of respondents' education on rural youth involvement in non-agricultural income generating activities indicating that the higher the

rural youth's education, the lower the influence on their involvement in non-agricultural income generating activities. An increase in education of rural youth by one class resulted in decreased involvement in non-agricultural income generating activities by 0.200. Similar finding was found regarding relationship between education and non-farm income generating activities by Ovwigbo (2014). This is possibly because, higher education leads to specialization.

**Employment status:** There is a significant positive effect of employment status of rural youth on their involvement in non-agricultural income generating activities implying that the more they were involved in non-agricultural income generating activities, the more they became more employed.

**Rural life preference:** Rural life preference has a significant positive effect on involvement in non-agricultural income generating activities. This implies that rural youth who had higher rural life preferences also were increasingly involved in non-agricultural income generating activities. Due to improved social amenities in the rural areas as well as improved linkages to urban centres, rural youth who desire to work in non-agricultural sectors would prefer to live in rural areas all things being equal. According to Winters et al. (2009), greater access to infrastructures is hypothesized to be positively linked to non-agricultural activities and negatively related to participation in agricultural activities. De Janvry et al. (2005) found that proximity to county capital influenced participation in rural non-agricultural activities in China.

**Achievement motivation:** Rural youth's achievement motivation had significant and positive influence on their involvement in non-agricultural income generating activities. The greater the rural youth desire for excellence and accomplishment, the higher is their involvement in non-agricultural income generating activities.

**Economic motivation:** It was observed that economic motivation of rural youth was significantly and positively related to their involvement in non-agricultural income generating activities. The import of this finding is that rural youth who placed more importance on the achievement of economic ends were more involved in non-agricultural income generating activities. Invariably, this could mean that rural youth who involved in non-agricultural income generating activities were successful in maximizing profits and income.

**Fatalism-scienticism:** There is a significant negative influence of fatalism-scienticism on involvement in non-agricultural income generating activities. Increased fatalism and scienticism resulted in a decrease and increase in rural youth involvement in non-agricultural income generating activities respectively. The possible explanation could be that fatalistic rural youth believed that everything that happened to them was an act of god and there was nothing they could do to change it. They therefore resigned to fate and could not push further to change their lives. As a result, they were less involved in income generating activities when compared with those with attitude of scienticism.

**Mass media exposure:** As mass media exposure of rural youth increased there was a significant positive influence on their involvement in non-agricultural income generating activities. This could be the result of improved access to information on available income generating opportunities. Young job seekers usually get information on available job vacancies through advertisement on mass media.

**Extension contact:** The result of regression analysis shows that extension contact is negatively related to involvement of rural youth in non-agricultural income generating activities. Increased extension contact resulted in decreased involvement in non-agricultural income generating activities. The probable reason could be that skills and knowledge

imparted by extension agents were irrelevant to non-agricultural income generating activities.

In summary, the findings of the study is in line with that of Lanjouw and Sheriff (2002) that significant relationship exists between personal characteristics and participation in non-farm employment. The findings also vindicate the report of Micevska and Rahut (2008) that household and location characteristics were important in explaining participation in non-farm activities. Among the ten selected variables, achievement motivation (20.7%) contributed most, while rural life preference (1.7%) contributed least in explaining the variation in youth's involvement in non-agricultural income generating activities (Table 6). Achievement motivation and economic motivation accounted for more than 50% of the total contribution of the selected ten variables.

## Conclusion

It was revealed from the study that rural youth in Jabalpur district of Madhya Pradesh, India were involved in number of non-agricultural income generating activities. The study established linearism between involvement in non-agricultural income generating activities and socio-economic and psychological characteristics of respondents. Factors such as marital status, family occupation, respondents' education, employment status, rural life preference, achievement motivation, economic motivation, fatalism-scienticism, mass media exposure and extension contact influenced involvement of rural youth in non-agricultural income generating activities. While respondents' education negatively influenced involvement in non-agricultural income generating activities, other remaining nine variables had positive influences. About 80 percent of the total accountable variation was explained by the first five of the ten explanatory variables. Therefore, development agencies in both public and private sectors working on issues concerning rural youth in the Jabalpur area, should give proper emphasis to the selected variables of the present study before launching any new program relating to their improvements through income generating activities. Skill development of rural youth through intensive training and utilization of this skilled manpower in different income generating activities are advocated.

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