

Determinants of Livelihood Patterns among Rural Youth

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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 in income generating activities among rural youth in Jabalpur district of Madhya Pradesh, India. Multi stage random sampling was used to collect data from 247 respondents. Majority of respondents had high mass media exposure and medium innovativeness respectively. There was significant relationship between involvement in income generating activities and socio-economic and psychological characteristics ($R^2=0.475$). Marital status ($t=2.913$), respondents' education ($t=-3.467$), employment status ($t=3.770$), achievement motivation ($t=2.719$), innovativeness ($t=3.321$), fatalism-scientificism ($t=-3.707$), mass media exposure ($t=8.469$) and reasons for educational and vocational training ($t=5.122$) were predictors of income generating activities engaged by rural youth at 1 per cent significant level while more than 1/3 of the total accountable variation was explained by mass media exposure. Governmental and non governmental organizations should take into consideration all income generating activities engaged in by rural youth when initiating and embarking on programmes targeted at improving their livelihoods.

Key words : Rural youth, Agricultural income generating activities, Non-agriculturer income activities, Livelihoods.

Rural areas are the economic backbone of most developing countries and contribute to their overall economic growth through creation of jobs and supply of food and raw materials to other growing sectors of the economy. Notwithstanding, rural areas are the most marginalized and characterized by poverty (Alemu, 2012). Hence poverty remains predominantly a rural phenomenon despite rapid urbanization observed in most developing and transition countries (IFAD, 2001). There are over one billion youth (aged 15-24) in the world, 85 per cent of these youth live in the developing countries and about 50 per cent of youth population in developing countries live in rural areas (United Nations, 2007). 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 globally have difficulties in accessing livelihood opportunities. 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 globally, the burning problems in the present day relates to rural youth, not much have been done to collect information about them in many countries and knowledge about their livelihoods remained fragmented among service providers (Waldie, 2004).

The demand for youth labour would not rise without a dynamic rural economy in agricultural and non-agricultural sectors. The role of agriculture in economic development cannot be over emphasized. In developing countries, agriculture provides the basis for a major share of employment and constitutes the main source of livelihoods for a large portion of the population (Vargas-lundius and Lanly, 2007).

Similarly, according to Bhadari (2013), about three-quarters of poor people in developing countries directly or indirectly depend on subsistence agriculture for their livelihoods. Small-scale farmers, women, youth and vulnerable groups who have little access to formal occupational employment depend on agriculture for employment, food security and social stability. It is therefore crystal clear that promotion of agriculture in agriculture-based countries is imperative for achieving the Millennium Development Goal (MDG) through reduction of poverty and hunger (World Bank, 2008).

CTA (2010), found that the low level of production and entrepreneurship as well as decreasing involvement of youth in agriculture to be resulted from low level of agricultural skills and limited access to financial resources. Rural households world-wide engage in a variety of non-farm activities to generate income (Meludu et al, 1999; Lanjouw and Lanjouw, 2001 and World Bank, 2003). 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 per cent in Honduras, 59 per cent in Costa Rica and 68 per cent in Haiti (Reardon, 1997). Recent data for Eastern Europe indicated 31 per cent in Armenia and 68 per cent 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) land based livelihoods of small and marginal farmers are increasingly becoming unsustainable in India, since their land has not been able to support their family's food requirement and fodder for their cattle. 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).

Traditionally, a large proportion of rural youth obtain their livelihoods either through supporting their family enterprises or working on their own account in agriculture, trade-related enterprises and craft industries, and in many cases contribute to family income or support themselves entirely while in full-time education (Porter et al., 2007). Rural youth are engaged in a diverse range of productive activities both agricultural and non-agricultural which make up their livelihood strategies (Bennell, 2010) and their extent of involvement in these activities describes their livelihood patterns. These productive activities bring streams of income to rural youth who engage in it and thus constitute their income generating activities. Ahmed et al. (2007); Al-amin, (2008) and Ahmed (2009) stated that living standard of rural poor will only be uplifted when they receive income from economic activities. Undoubtedly, the plight of rural youth would be alleviated through their involvement in income generating activities. Carlotte et al (2007) admonishes that a full range of rural income generating activities (RIGA), both in agricultural and non-agricultural carried out by rural households should be considered when thinking about rural development. According to them, this can allow understanding of the relationship between the various economic activities that take place in the rural space and of their implications for economic growth and poverty reduction. From history of economic development, it is pertinent to note that, development of the non-farm sector is related to improvement on farm production. Increased productivity in agriculture raises farm income and hence the demand for goods and services produced outside agriculture.

An understanding of the livelihoods of rural youth would possibly create opportunities that stimulate their entrepreneurial skills in a way that fosters innovation, productivity and environmental sustainability of rural activities. It will assist in developing policies and services aimed at reducing rural poverty.

METHODOLOGY

Jabalpur is located on 23 10 N latitude and 79 57 E longitude. According to the 2011 census, Jabalpur district has a population of 2,460,714 people. The area of the district is 10,160 Kms while the administrative headquarters is located at 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 (Panagar and Patan) out of the six blocks in the district were randomly selected. The second stage involved delineation of the 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 per cent 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).

Table 1
Villages and rural youth sampled 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
	Total	1236	247	247

Method of data collection

Deriving accurate information is highly dependent upon the survey method (Ahmed et al., 2011). According to Ogunlade and Adebayo (2009), the most commonly used approach is the direct face-to-face interview. In this study, interview schedule was used to collect data on socio-economic and psychological characteristics as well as income generating activities.

Measurement of variables

The dependent variable for the study which is involvement in 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 formulae:

Low < $(X - 0.425SD)$

Medium $(X \pm 0.425 SD)$

High > $(X + 0.425 SD)$

Multiple regressions were used to analyze determinants of livelihood patterns (extent of involvement in income generating activities) among rural youth. The model is expressed as:

$$Y = a + b_1X_1 + \dots + b_nX_n + e$$

Where Y= livelihood patterns

a = constant term

b1, b2, bn= Regression coefficients

e = error

X1, X2.... Xn = Regression parameters, which are:

X1 = Marital status (married=3, Unmarried=1)

X2 = Respondents' education (in standards)

X3 = Employment status (Schooling=1, receiving training=2, looking for employment=3, currently employed=4)

X4 = Achievement motivation (Total scores)

X5 = Innovativeness (Total scores)

X6 = Fatalism-scienticism (Total scores)

X7 = Mass media exposure (Total scores)

X8 = Reasons for educational and vocational training (Total scores)

RESULTS AND DISCUSSION

Majorities (72.10%) of the rural youth were married and educated up to high school (42.50). Similar findings were reported by NSSO (2011) that highest proportion of rural youth in India was married. Contrarily, majority of rural youth were reported by NSSO (2011) to be educated up to primary school. The implication of these findings could be increased educational aspiration among rural youth. In addition,

Table 2
Frequency distribution and categorization of respondents' socio-economic and psychological characteristics (n=247)

Variables	Frequencies	Percentages
Marital Status (Mean =2.44, SD =0.899)		
Unmarried	69	27.90
Married	178	72.10
Total	247	100.00
Respondents' educational attainment (Mean =10.33, SD =4.128)		
Illiterate	00	00.00
Functionally literate	12	04.90
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
Employment status (Mean =3.19, SD =1.165)		
Schooling	48	19.40
Receiving training/Apprentice	04	01.60
Looking for employment	48	19.40
Currently employed	147	59.50
Total	247	100.00
Achievement motivation (Mean =12.60, SD =2.424)		
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
Innovativeness (Mean =8.63, SD =1.672)		
Low < (X - 0.425SD)	57	23.08
Medium (X ± 0.425SD)	104	42.11
High > (X + 0.425SD)	86	34.81
Total	247	100.00

Fatalism-scienticism (Mean =14.28, SD =4.189)		
Fatalism (Above mean score)	139	56.28
Scienticism (Below mean score)	108	43.72
Total	247	100.00
Mass media exposure (Mean =11.62, SD =2.982)		
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

majority of respondents were currently employed (59.50%), had low (35.63%) achievement motivation. The innovativeness of majority of the respondents was categorized to be medium (42.11%). This is consistent with findings of Palaniswamy (1984) who reported that majority of farm youth had medium innovativeness. Majorit of the respondents were fatal and had high mass media exposure.

Table 3
Ranking by mean of reasons for educational and vocational training among respondents

Reasons	Mean	Rank
To make a career change	1.85	5 th
To move into higher salaried job (carrier)	1.87	4 th
To earn degree, certificate and license	1.47	6 th
To explore an area of interest	1.98	2 nd
For future employment opportunity	1.94	3 rd
To update skills	2.02	1 st

To update skills (ranked first), explore an area of interest (ranked second) and for future employment opportunity (third) were the most important reasons for educational and vocational training (Table 3). While to earn degree, certificate and license was ranked least implying that educational and vocational training was sought by rural youth for personal development and gainful employment. This calls for relevance of educational and vocational training

Cereal production, pulse production and vegetable production ranked first, second and third respectively (Table 4). These findings are in conformity with that of Oladeji (2007) who reported crop production as the most participated agricultural income generating activities among rural dwellers.

The most practiced non-agricultural income generating activities were petty trading (ranked first), hired labour (ranked second) while construction work ranked third (Table 5) . These findings support the views of Okoye (1995); CPD (2004); Oladeji (2007); Sheheli (2012) and Ovwigho (2014) that even though

Table 4
Ranking by mean of respondents according to extent of involvement in agricultural income generating activities

S. No.	Agricultural related income generating activities	Mean	Rank
1.	Cereal production	1.35	1 st
2.	Pulse production	0.84	2 nd
3.	Oil seed production	0.47	4 th
4.	Fruit production	0.29	6 th
5.	Goat rearing	0.18	9 th
6.	Poultry farming	0.10	15 th
7.	Milk production	0.43	5 th
8.	Fish farming	0.19	8 th
9.	Vegetable production	0.54	3 rd
10.	Raising seedlings for vegetable production	0.16	12 th
11.	Raising plants for fruit production	0.17	10 th
12.	Floriculture (Gardening & flower production)	0.14	14 th
13.	Cash crops production	0.29	6 th
14.	Root crops production	0.05	16 th
15.	Fishing	0.15	13 th
16.	Bee keeping	0.03	17 th
17.	Mushroom cultivation	0.16	11 th

farming is the predominant activity in most rural areas, rural dwellers usually engage in non-agricultural income generating activities.

Majority of rural youth were found to have medium and low involvement in income generating activities (Table 6). Barrett et al. (2001), Kydd (2002), Reardon et al. (2006) and Wanyama et al. (2010) and Senadza (2011) state that income diversification among farmers involves adding income-generating activities including livestock, crop, non-farm and off-farm activities. This generates a set of income generating activities that forms their livelihood patterns.

Table 5
Ranking by mean the extent of involvement in non-agricultural income generating activities

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

Table 6
Categorization of respondents according to extent of involvement in income generating activities (Agricultural & non agricultural related income generating activities)

Categories	Frequencies	Percentages
Low < (X - 0.425SD)	97	39.27
Medium (X ± 0.425SD)	98	39.68
High > (X + 0.425SD above)	52	21.05
Total	247	100.00

Mean = 9.65 Standard deviation = 7.454

Diversification into both agricultural and non agricultural income generating activities is thus the norm, rather than the exception (Carlotte et al., 2007). It was more plausible to use the term income generating activities instead of occupation to describe the jobs done by rural peoples (Ovwigho and Ifie, 2009).

Through backward elimination and forward selection, eight explanatory variables were selected and their effect on income generating activities determined. The value of R-square was 0.492 which indicates that 49.2 per cent of the variation involvement in income generating activities could be accounted for by the combined effect of these eight variables and the other 50.8 per cent remained unexplained. The adjusted R-square for the model was 0.475, which indicates only a

slight overestimation. The regression model was well fitted since F-ratio (28.820) at 1 per cent significant level was found to be highly statistically significant.

Significant negative relationships were found between rural youth's education, fatalism-scienticism and their involvement in income generating activities. While significant positive relationships were found between rural youth's marital status, employment status, achievement motivation, innovativeness, mass media exposure and reasons for educational and vocational training and their involvement in income generating activities (Table 7). As the level of education of rural youth increased by one standard there was a

Table 7
Regression coefficients of involvement in income generating activities (Agriculture and non-agriculture) with selected variables of rural youth

Variables	Coefficients	T- statistics	Significant level
Intercept	-15.484	-4.017	0.000
Marital status	1.157	2.913	0.004
Respondents' education	- 0.317	-3.467	0.001
Employment status	1.392	3.770	0.000
Achievement motivation	0.458	2.719	0.007
Innovativeness	0.838	3.321	0.001
Fatalism – scienticism	- 0.352	-3.707	0.000
Mass media exposure	1.078	8.469	0.000
Reasons educational. and Vocational training	0.541	5.122	0.000

R² = 0.492, Adjusted R² = 0.475, F-ratio = 28.820, F-probability = 0.000

reduction in their involvement in income generating activities by 0.625, possibly because, higher education leads to specialization. These findings are consistent with that of Ovwigho (2014) who reported a negative relationship between education and involvement in non-farm income generating activities among local farmers. A negative relationship was also found for fatalism-scienticism. This implies that there is indirect relationship between fatalism and involvement in income generating activities. As fatalism increased there was reduction in involvement in income generating activities among rural youth. A positive relationship that exists between marital status and income generating activities indicated that married rural youth were more involved than unmarried ones. Greater responsibilities associated with marriage could be the possible explanation for the finding. The study also found that youth who had more important reasons for educational and vocational training were more involved in income generating activities than those who had fewer reasons. To update skills, explore an area of interest and for future employment were the most important reasons for educational and vocational training. Higher achievement motivation, innovativeness and mass media exposure resulted in greater involvement in income generating activities. In summary, the findings of the study vindicates that of

Table 8
Stepwise multiple regression analysis showing contribution of eight variables to involvement in income generating activities (agriculture and non-agriculture)

Model	Dimension entered	Multiple R	Change in R ²	Variation expressed (%)	Significant level
1.	Mass media exposure	0.436	0.190	19.00	0.000
2.	Innovativeness	0.566	0.130	13.00	0.000
3.	Fatalism – scienticism	0.602	0.042	4.20	0.000
4.	Respondents' education	0.625	0.028	2.80	0.001
5.	Marital status	0.647	0.027	2.70	0.001
6.	Reasons education and Voc. Training	0.663	0.210	2.10	0.003
7.	Employment status	0.690	0.037	3.70	0.000
8.	Achievement motivation	0.701	0.016	1.60	0.007

Lanjouw and Sheriff (2002) who reported that significant relationship exists between personal characteristics and participation in non-farm employment. Micevska and Rahut (2008) concluded that household characteristics and location characteristics were important in explaining participation in non-farm activities.

Among the eight selected variables, mass media exposure (19.0%) contributed most, while achievement motivation (1.6%) contributed least in explaining the variation in youth's involvement in income generating activities (Table 8). Mass media exposure and innovativeness accounted for more than 60% of the total contribution of the selected eight variables.

CONCLUSION

It is evident from the study that rural youth in Jabalpur district of Madhya Pradesh, India were involved in a number of income generating activities. The study established linearism between involvement

in income generating activities and socio-economic and psychological characteristics of respondents. Factors such as marital status, respondents' education, employment status, achievement motivation, innovativeness, fatalism-scienticism, mass media exposure and reasons for educational and vocational training influence involvement of rural youth in income generating activities vis-à-vis their livelihood patterns. Therefore, development agencies, in both the public and private sectors, who are working on issues concerning rural youth in the study area, should give proper emphasis to the selected variables of the present study before launching any new program relating to their improvement through income activities. Skilled development of rural youth through intensive training and utilization of this skilled manpower in different income generating activities is also advocated.

Paper received on : May 25, 2014

Accepted on : June 06, 2014

REFERENCES

1. Ahmed N (2009), The Sustainable Livelihoods Approach to the Development of Fish Farming in Rural Bangladesh. *J. of International Farm Management*, 4 (4): 1-18
2. Ahmed N, Wahab M A and Thilsted S H (2007), Integrated Aquaculture-Agriculture Systems in Bangladesh: Potential for Sustainable Livelihoods and Nutritional Security of the Rural Poor, *Aquaculture Asia* 12(1): 14-22
3. Al-amin S, (2008), Role of Women in Maintaining Sustainable Livelihoods of Char Landers in Selected Areas of Jamalpur District. *Ph D Thesis. Department of Agricultural Extension Education Bangladesh Agricultural University, Mymensingh*
4. Alemu Z G (2008), Livelihood Strategies in Rural South Africa: Implications for Poverty Reduction. Selected Paper Prepared for Presentation at the International Association of Agricultural Economists (IAAE), *Triennial Conference, Foz do Iguacu, Brazil*
5. Barrett C B, Reardon T and Webb P (2001), Nonfarm Income Diversification and Household Livelihood Strategies in Rural Africa: Concepts, Dynamics, and Policy Implication. *Working Paper, Cornell*

University,

6. Ithaca New York: Center for the Study of Inequality Bhandari P B (2013): Rural Livelihood Change? Household Capital, Community resources and Livelihood Transition, *J. of Rural studies (ELSEVIER)* 32: 126-136
7. Carletto G, Covarrubias K., Davis B, Krausova M, Stamoulis K., Winters P and Zezza A (2007), Rural Income Generating Activities in Developing Countries. *J. of Agricultural and Development Economics*, 4(1):146-193
8. CPD (2004), Nature and Impact of Women's Participation in Economic Activities in Rural Bangladesh. In Centre for Policy Dialogue (CPD) and International Rice Research Institute (IRRI). *Policy Brief 7. Available at http://www.cpdbangladesh.org/publications/cpdiri/cpdiri_7*
9. CTA (2010), A Reader: Briefing no 19-Youth and Rural Development in ACP Countries. **Brussels.**
10. Davis J (2004), The Rural Non-Farm Economy, Livelihoods and their Diversification: Issues and Options Chatham, UK: *Natural Resource Institute*
11. Hiremath B N (2007), The Changing Faces of Rural Livelihood in India, In National Civil Society **Conference: What it takes to eradicate poverty**, held at *Institute of Rural Management Anand 4-6 December*
12. IFAD (2001), Rural Poverty Report 2001: The Challenge of Ending Rural Poverty. Oxford: *Oxford University Press for International Fund for Agricultural Development.*
13. ILO (2004), Global Employment for Youth, Geneva Kydd J (2002). Agriculture and Rural Livelihoods: Is Globalization Opening or Blocking Paths Out of Rural Poverty? *Agricultural Research and Extension Network, Network Paper 121.*
14. Lanjouw, J O and Lanjouw P (2001), The Rural Non-Farm Sector: Issues and Evidence from Developing Countries. *Agricultural Economics*, 26(1): 1-23
15. Lanjouw, J.O. and Sheriff, A. (2002). Rural Non-Farm Employment in India: Access and Poverty Impact. *Working Paper Series No. 81. Retrieved from <http://www.ncaer.org/rvp81.pdf>.*
16. Meludu N T, Ifie I, Akinbile L A and Adekoya E A (1999), The Role of Women in Sustainable Food Security in Nigeria: A Case of Udu local Government Area of Delta State. *J. of Sustainable Agriculture*, 15(1): 87-97
17. Micevska M and Rahut, D B (2008), Rural Nonfarm Employment and Incomes in the Himalayas. Working Paper No. 205. New Dehli: *Indian Council for Research on International Development*
18. Mukherjee AN (2002), Farm Productivity and Nonfarm Employment for Rural Development in India, *Ph D Thesis in Economics University of Tsukuba*
19. NSSO (2011), Key Indicators of Employment and Unemployment in India, NSS 66th Round July 2009 – June 2010, National Sample Survey Office, *Ministry of Statistics and Programme Implementation, Government of India*
20. Ogunlade I and Adebayo S A (2009), Socio-economic Status of Women in Rural Poultry Production in Selected Areas of Kwara State Nigeria. *International J. of Poultry Science*, 8: 55-59
21. Okoye C U (1995), The Rural Economy and Community Banking in Nigeria. In E C Eboh, C U Okoye & D Ayichi (Eds.), *Rural Development in Nigeria: Company: 200-215.*
22. Oladeji J O (2007), Effect of Land Degradation on Income Generating Activities of Farmers in Imo State, Nigeria, *J. of Economics and Rural Development*, 16(1): 93-106
23. Ovwigho B O and Ifie P A. (2009), Principles of Youth Development in Africa. **Benin-City: Ethiope Publishers**
24. Ovwigho B O (2014), Factors Influencing Involvement in Nonfarm Income Generating Activities among Local Farmers: The Case of Ughelli South Local Government Area of Delta State, Nigeria, *Sustainable agriculture Research*, 3(1): 76-84
25. Palaniswamy A (1984), A study on modernization characteristics and training needs of sugarcane growers, *Ph. D. Thesis, University of Agricultural Sciences, Bangalore*
26. Porter G, Blaufuss K and Owusu A F (2007), Youth, Mobility and rural livelihood in Sub-Saharan Africa: Perspectives from Ghana and Nigeria. *Africa insight*, 37 (3): 420 – 431
27. Reardon T (1997), Using Evidence of Household Income Diversification to Inform Study of the Rural Nonfarm Labor Market in Africa. *World Development*, 25(5): 735-748
28. Reardon T, Berdegue J, Barrett C B and Stamoulis K (2006), Household Income Diversification into Rural Nonfarm Activities. In S. Haggblade, P. B. R. Hazell & T. Reardon (Eds.). *Transforming the Rural Nonfarm Economy* (p. 34). **Baltimore: Johns Hopkins University Press**
29. Reardon T, Stamoulis k, Cruz M E, Balisacan A, Berdeque J and Banks B (1998), Rural Non-Farm Income in Developing Countries; In FAO: *FAO Agriculture Series No:31, Rome*

30. Senadza P (2011), Does Non-farm Income Improves or Worsen Income Inequality? Evidence from Rural Ghana. *African Review of Economic and Finance*, 2(2): 104-121
31. Sheheli S (2012), Improving Livelihood of Rural Women through Income Generating Activities in Bangladesh: *Ph.D. Dissertation, Humboldt University, Berlin Germany*
32. United Nations (2007), World Youth Report. 2007. New York: United Nations ILO(2004), Global employment trends for youth, Geneva
33. Vergas-Lundius R and Lanly G (2007), Migration and Rural Employment. Paper prepared for the Round Table Organised by the Policy Division during the Thirtieth Session of the *Governing Council of IFAD: 12 – 24*
34. Waldie K (2004), Youth and Rural Livelihoods Retrieved from file:///c:/Documents% 20 and % 20 settings/library/Desktop/youth-an... on 21st March 2011
35. Wanyama M L, Mose L O, Odendo M, Okuro, J. O, Owuor G and Mohammed L (2010), Determinants of Income Diversification Strategies amongst Rural Households in Maize based Farming Systems of Kenya. *African J. of Food Science*, 4(12): 754-763.
36. Wikipedia (2013), Jabalpur. Retrieved from http://en.wikipedia.org/wiki/jabalpur_district
37. World Bank (2008), World Development Report 2008. *Agriculture for Development. World Bank Publications.*
38. World Bank. (2003). Reaching the Rural Poor: A Renewed Strategy for Rural Development. Washington, DC: *The World Bank*