

Socio-Psychological Drivers of Livelihood Diversification in Lakshadweep

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ABSTRACT

Diversification is the incorporation of new activities into the economic portfolio. The rural livelihood diversification therefore is an integral dimension of development agenda for strengthening rural livelihood and sustaining livelihood security. The study was conducted among 120 households in Kalpeni and Andrott islands of U.T. of Lakshadweep to assess the extent of diversification and to analyse the socio-psychological factors promoting diversification. Respondents were randomly selected and categorized into three livelihood classes based on the share of agriculture in households' income. Extent of livelihood diversification is studied in terms of number of income sources of a household and Simpson index of diversification. It is obtained that most of the households were having diverse livelihood strategy. It has been found that majority of the diversified households have medium diversification index with average diversification index of 0.32. Determinants of diversification were analyzed using Kruskal-Wallis test. It was found out that mass media exposure was the most significant factor leading to diversification followed by social participation, change proneness and achievement motivation.

Keywords: House hold income, livelihood diversification, socio-psychological drivers

INTRODUCTION

Livelihood diversification refers to a continuous adaptive process whereby households add new activities, maintain existing ones or drop others, thereby maintaining diverse and changing livelihood portfolios. It is a characteristic aspect of rural household survival strategies. The concept of rural livelihood diversification has received renewed attention and policy focus since there is concern on the incidence of deep rooting of poverty amongst the households depending on single income from farm activities. The rural employment diversification is considered to be driving force of rural development (UN-Wye Group 2007). FAO & World Bank (2001) has also highlighted diversification as the single most important source of poverty reduction for small farmers in South and South East Asia. Livelihood diversification has far reaching implications beyond the idea of poverty reduction. As Ellis, (1998) has pointed out livelihood diversification is a survival strategy of rural households in developing countries and which help to stabilize their incomes. Diversification is not only carried out as a survival strategy, it can also be promoted by incentives. While some diversify because of limited choice, better off households may diversify because they have a lot of choices (Barret *et al.*, 2000; Hart, 1994). There are two ways to look into livelihood diversification.

One is the individuals engaging in different forms of rural employment; both farm as well as non-farm and the second one is the rural income diversification enabling individuals or households to have income sourced from the diversified sources. For the rural economy to sustain in the long run, the scope of its diversification would necessitate expansion to the wider dimensions of livelihood diversification. The rural livelihood diversification therefore is an integral dimension of development agenda for strengthening rural livelihood and sustaining livelihood security.

Diversification of livelihood activities at the household level is not a recent phenomenon. It is being realized for some time that rural people no longer remain confined to agriculture only but combine a range of occupations to construct a diverse portfolio of activities (Dercon and Krishanan, 1996) In agricultural context Rural livelihood diversification simply describes the phenomenon by which small farm households take up nonfarm activities or rely on nonfarm income transfers for the overall standard of living that they are able to achieve (Ellis, 2005). The driving force behind opting for multiple occupations is to maximize household income and to minimize risk. However, nature and extent of choices are mostly limited by opportunities offered by

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household assets and the local resource base. Studies shows that diversified livelihood system are not only less vulnerable but also more sustainable.

The Lakshadweep islands form the smallest Union Territory of India, where agriculture is the mainstay of the economy. The earliest settlers who came from Malabar coast, brought with them coconut and started cultivation. The main livelihood operations of the people in Lakshadweep were fishing and coconut cultivation in earlier periods. But the situation has changed overtime with emergence of diverse opportunities especially in non-farm sector like business, service sector *etc.* In this context, understanding the islander's livelihood diversification was found to be imperative to get information for strategic planning to achieve sustainable development of people. Therefore, the study was aimed at exploring the dimension of livelihoods of people and to identify the nature, drivers and extent of livelihood diversification. Though livelihood diversification is influenced by many variables, role of socio-economic variables are frequently studied. Intervening role of psychological variables in manifestation and transformation of socio-economic drivers into action domain is often neglected. So the present study focuses more on the influence of socio-psychological variables.

METHODOLOGY

The study was conducted in two islands Kalpeni and Andrott of Lakshadweep. In each island two wards and from each ward 30 households were selected randomly constituting a total sample size of 120. The number of income source of a household is a key indicator of extent of livelihood diversification. Different sources of income were identified with the help of semi-structured interview schedule.

The Simpson index of diversity is used to measure the diversity. Khatun and Roy (2012) used Simpson index of diversity to study rural livelihood diversification in West Bengal.

$$\text{The Simpson Index of Diversity (SID)} = 1 - \sum P_i^2$$

Where, P is the proportion of income coming from source i.

The value of SID always falls between 0 and 1. If there is just one source of income, $P=1$, so $SID=0$. As the number of sources increases, the shares (P) decline, as does the sum of the squared shares, so that SID approaches to 1. If there are k sources of income, then SID falls between zero and $1-1/k$ accordingly. The potential

socio-psychological drivers of diversification were identified from literature review and expert opinion. Significance of these variables were analysed using Kruskal-Wallis test for one way ANOVA.

RESULTS AND DISCUSSION

Extent of livelihood diversification

The study shows that a majority of the households depend on diverse options for income generation. Only 35 per cent of households were found to deriving their income from single source which underline the observation of Barrett *et al.*, (2001) that diversification is the norm and that few people collect all their income from just one source or hold all their wealth in the form of any single asset. Households obtaining income from two sources and three sources are 22.50 per cent and 25 per cent respectively. Ten per cent of the households selected for the study obtaining their income from four sources and 7.5 per cent from five sources.

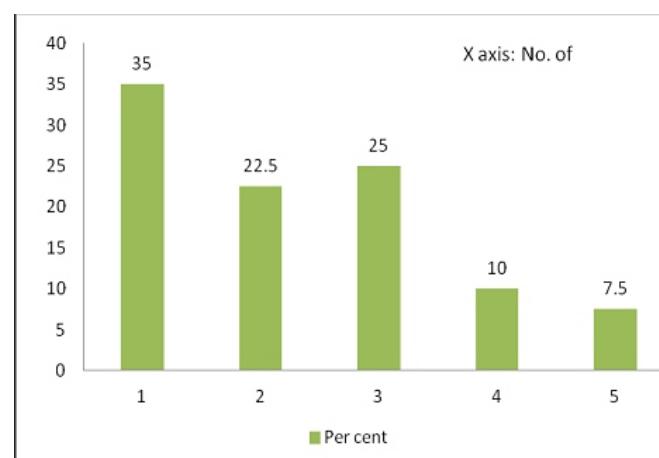


Figure.1: Extent of livelihood diversification based on number of income sources (n=120)

Simpson index of diversification

It was observed that 47.5 per cent of the households are having low diversification index and 38.33 per cent having medium diversification index. Only 14.17 per cent fall in high diversification index (Table 1).

Table 1: Distribution of households based on their diversification index

n=120		
Diversification Index	Frequency	Per cent
Low (0.38)	57	47.50
Medium (0.38 to 0.63)	46	38.33
High (Above 0.63)	17	14.17

Average Diversification Index in the study area = 0.32

Among the 120 households selected, 42 were involved in only one activity as their livelihood option. Diversification Index of rest of the households (diversified households) shows that a majority (58.97%) of them have medium diversification index.

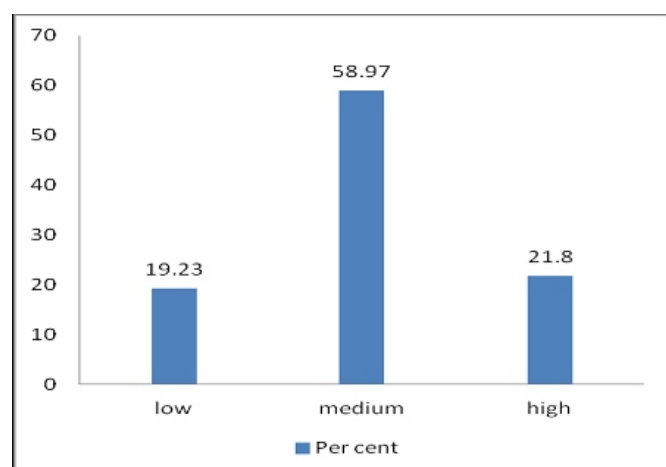


Figure 2: Distribution of diversified households according to their DI n=78

Drivers of diversification

Socio-psychological variables like change proneness, mass media exposure, frequency and nature of social participation and economic motivation were selected for the study based on literature review and expert opinion. The sample of respondents was divided into three groups based on the share of agriculture in household income. First group representing people who were engaged in farming only (10.83%) and the second group involves those who were engaged in non-farm based activities only (45%). Third group involved in both farm and non-farm activities as their livelihood source (44.17%). Mean values of selected socio-psychological variables for three groups were analyzed using Kruskal-Wallis one way ANOVA to see whether the variation in intensity of the selected variable with the change in the share of household income is significant or not.

Change proneness

Change proneness is the tendency of the human being to accept the changes and practices in life for the welfare of the self and society. To measure this variable, scale developed by Sinha and Kolte (1974) and followed by Hardikar (1998) is used. The data in figure 3 shows that a majority of the respondents (64%) fall in medium level of change proneness. The results of Kruskal-Wallis

one way ANOVA indicate that change proneness among three groups is significantly different at one per cent level of significance (Table 2). Higher mean rank of 71.32 for non-farm alone followed by 53.19 for both farm and non-farm points out that change proneness and dependence on agriculture are inversely related. This in turn highlights the important role of the psychological variable 'change proneness' in actualizing the farm to nonfarm diversification.

Figure 3: Distribution of respondents according to change Proneness

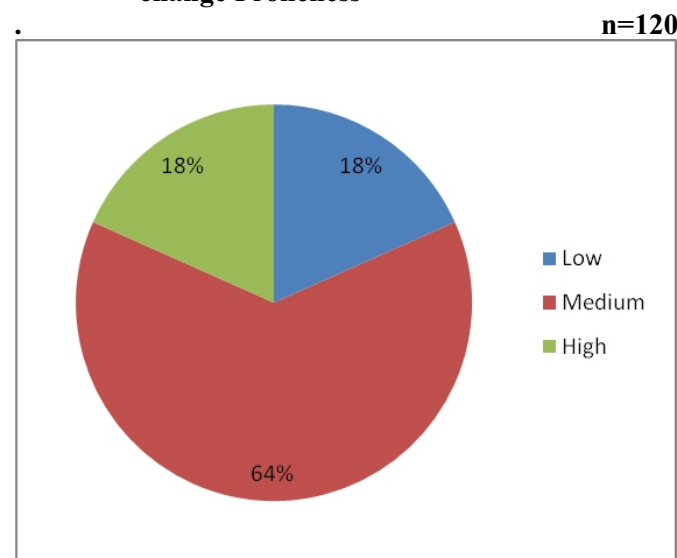


Table 2: Kruskal-Wallis test for change proneness and its level of significance

n=120		
Particulars	Frequency	Mean Ranks
Farm only	13	45.35
Non-farm only	54	71.32
Both farm ana non-farm	53	53.19

Social participation

Social participation refers to the degree of involvement of the respondent in formal and informal organizations, simply as a member or an office bearer as well as his/her frequency of participation in its activities. The scale developed by Sherin (1998) was used with slight modification for measurement. Social participation of the respondents was analyzed in terms of nature and frequency of participation among different groups using Kruskal-Wallis one way ANOVA. Test indicates that for both nature and frequency of social participation, the three groups are significantly different at one per cent level of significance. Mean rank of non-farm alone group is highest in both case followed by both farm and non-farm

group and farming alone group with least mean rank (Tables 3 and 4). Along with revealing the relation between social participation and non dependence on agriculture, the result also lead to infer that lower social participation is a barrier to farm to non-farm diversification.

Table 3: Kruskal-Wallis test for nature of social participation and its level of significance

n=120		
Particulars	Frequency	Mean Ranks
Farm alone	13	44.31
Non-farm alone	54	73.38
Both farm and non-farm	53	51.35

Table 4: Kruskal-Wallis test for frequency of social participation and its level of significance

n=120		
Particulars	Frequency	Mean Ranks
Farm alone	13	39.77
Non-farm alone	54	75.94
Both farm and non-farm	53	49.85

Mass media Exposure

Mass media exposure refers to the degree of utilization of mass media by respondents. The quantification of mass media exposure was done based on the scale developed by Reddy (1976). Exposure to number of mass media sources like newspaper, radio, television, internet *etc.* are measured on a 3 point continuum.

In case of mass media exposure also there was significant difference among the three groups as per the results of Kruskal-Wallis test of mass media exposure of sample. Very high mean value in case of non-farm group (82.94) and very low value in case of farm group (25.5) emphasize the fact that low access and use of information and the dependence on non farm income sources goes together. It is clear that low mass media participation in farming group (Table 5) is an obstacle for their diversification.

Table 5: Kruskal-Wallis test for mass media exposure and its level of significance

n=120		
Particulars	Frequency	Mean Ranks
Farm alone	13	25.50
Non-farm alone	54	82.94
Both farm and non-farm	53	46.23

Economic motivation

Economic motivation is defined as the occupational success in terms of profit maximization and the relative value placed by a person on economic ends. It was measured with the help of scale developed by Supe (2007) with slight modification. As presented in figure 4 majority of the respondents (66 %) are having medium level of economic motivation. Twenty per cent are high in their economic motivation. Only 14 per cent are low in this attribute. One way ANOVA using Kruskal-Wallis test shown that even though mean rank of non-farm group is more than other two groups it is not significantly different.

Figure 4: Distribution of respondents according to their level of economic motivation

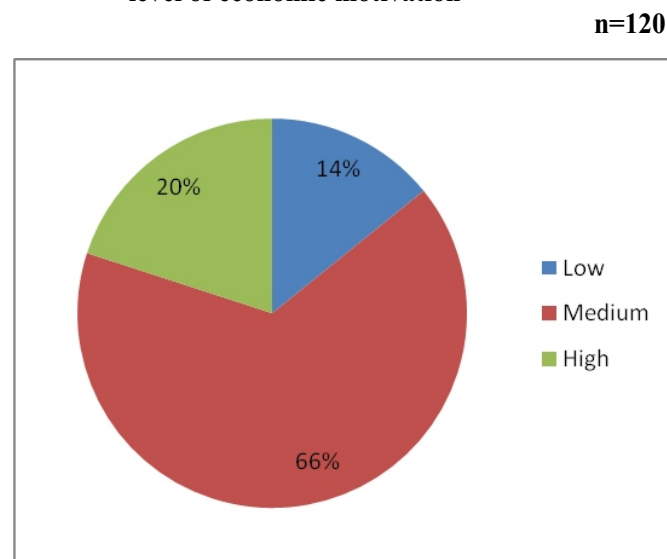


Table 6: Computed value of Kruskal-Wallis test for economic motivation and its level of significance

n=120		
Particulars	Frequency	Mean Ranks
Farm alone	13	61.81
Non-farm alone	54	66.06
Both farm and non-farm	53	54.51

Major drivers of Livelihood Diversification

Analysis of the drivers of livelihood diversification shows the following results. It is clear from the data in table 7 that mass media exposure was the most significant factor leading to diversification followed by social participation and change proneness. Mass media have strong influence on the choice of rural households as it provides information on diverse opportunities available. Asmah (2011) found that households who listen to radio at least once a week were found to have a greater

likelihood to diversify their livelihood portfolio. Saha and Bahal (2010) have also pointed out positive effect of communication on livelihood diversification.

Table 7: Comparison of different drivers of livelihood diversification based on Kruskal-Wallis test

Drivers	Frequency	Chi-square	p value
Change proneness	120	10.867**	0.004
Nature of social participation	120	16.215**	<0.0001
Frequency of social participation	120	24.443**	<0.0001
Mass media exposure	120	45.685**	<0.0001
Economic motivation	120	3.055	0.217

**Significant at 1% level,*Significant at 5% level

Change, transformation and adaptation are key components of livelihood diversification (Stuart and Johnson, 2011). Change proneness or positive attitude toward full or partial change from the present livelihood options in turns lead to decision and action to diversify. Studies by Bebbington (1997) and Winters *et al.*, (2002) have emphasized the importance of strengthening social assets, like strategic alliances among actors (society-market-farmers), social participation and empowerment in policy design, and long term relationships in sustainable projects in order to promote diversification towards non-farm activities. Yishak *et al.*, (2014) has also identified participation in social leadership as a major determinant of rural household livelihood strategies in southern Ethiopia. Khatun and Roy (2012) have also demonstrated the evidence of positive relation between livelihood diversification and membership to an association. Non significance of the variable 'economic motivation' suggest that major intention of livelihood diversification is to reduce income risks than economic gain as suggested by Barrett *et al.*, (2001). This can be further attributed to the fact that sustainability rather than profiteering is the crux of the prevalent cultural and value system of the island. Diversification as a survival strategy involve exploitation of strategic complementarities and positive interactions between different activities in order to earn cash income and finance investment in the face of income and credit failures (Ruben and Van den Berg, 2001).

CONCLUSION

Livelihood diversification is increasingly recognized as an important growth and survival strategy especially in smallholders' context. Triggers of diversification can be many, including the latent ones. Present study has tried to highlight the influential role of socio-psychological variables on households' decision to opt for diverse strategies. The study has revealed that 65 percent of households received income at least from two sources and

42.5 percent households are associated with three or more income sources. Diversification Index of diversified households (with at least two income sources) revealed that a majority of them have medium diversification index (58.97 per cent). Analysis of socio-psychological drivers of livelihood diversification pointed out that mass media exposure was the most significant factor leading to diversification followed by social participation, change proneness and economic motivation.

The aforementioned findings clearly points out the facilitating role of 'cosmopolitaness' (mass media exposure and social participation) in opening doors to diverse avenues to meet out the personal motivations. It implies the need for improving access to and use of mass media including information and communication technologies (ICTs) as well as organizational development in rural areas which can enhance the social and networking capacities of rural population. The necessity of policy focus on these aspects stems from the fact that livelihood diversification strategies can help people come out of 'vicious cycle of poverty' and capitalize on new opportunities for growth and development.

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REFERENCES

- Asmah, E. E. 2011. Rural Livelihood Diversification and Agricultural Household Welfare in Ghana, *Journal of Development and Agricultural Economics*, 3(7): 325-334.
- Barret, C., Bezuneh, M., Clay, D. and Reardon, T. 2000. 'Heterogenous Constraints, Incentives and Income Diversification Strategies in Rural Africa'. Project report to usaid basis crsp, Cornell University.
- Barrett, C.B., Reardon, T. and Webb, P. 2001. Nonfarm income diversification and household livelihood strategies in rural Africa: concepts, dynamics, and policy implications. *Food Policy* 26:315-331.
- Bebbington, A. 1997. "Social Capital and Rural Intensification: Local Organizations and Islands of Sustainability in the Rural Andes," *The Geographical Journal Environmental Transformation in Developing Countries*, 163 (2): 189-197.
- Dercon, S. and Krishnan, P. 1996. Income portfolios in rural Ethiopia and Tanzania: Choices and constraints, *Journal of Development Studies*, 32(6): 850-75.

- Ellis, F. 1998. Household strategies and rural livelihood diversification, *Journal of Development Studies*, 35(1): 1-38.
- Ellis, F. 2005. Small Farms, Livelihood Diversification, and Rural-Urban Transitions: Strategic Issues in Sub-Saharan Africa, A Paper prepared for the Research Workshop on: "The Future of Small Farms." Withersdane Conference Centre, Wye, Kent, UK, 26-29 June 2005.
- Hart, G. 1994. Development or Deterioration? : Work in Rural Asia, Chapt. The Dynamics of Diversification in an Asian Rice Region, pp. 4771. Boulder, CO: Lynne Rienner.
- Khatun, D. and Roy, B. C. 2012. Rural Livelihood Diversification in West Bengal: Determinants and Constraints, *Agricultural Economics Research Review*, 25(1): 115-124.
- Ruben, R. and Van Der Berg, M. 2001. Non-farm employment and rural farm households in Honduras, *World Development*, 29(3): 549-560.
- Start, Daniel and Craig Johnson 2001. Transformation, Well-being and the State: Rural Livelihood Diversification in South Asia. ODI Working Paper.
- FAO and World Bank. 2001. Farming systems and poverty Improving farmers livelihoods in a changing world, Rome and Washington D. C.
- United Nations, 2007. The Wye Group Handbook 'Rural Households Livelihood and Well-Being'.
- Winters, P., B. Davis and L. Corral 2002. "Assets, activities and income generation in rural Mexico: factoring in social and public capital", *Agricultural Economics*, 27: 139- 156.
- Yishak Gecho, Gezahegn Ayele, Tesfaye Lemma and Dawit Alemu. 2014. Rural Household Livelihood Strategies: Options and Determinants in the Case of Wolaita Zone, Southern Ethiopia. *Social Sciences*. 3 : 92-104. doi: 10.11648/j.ss.20140303.15.