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Information, credit and market access by upland tribals in north-eastern Himalaya of India: An empirical study

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ABSTRACT

The present study was conducted during 2016-17 in Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura states of the North-Eastern Himalayan (NEH) region to analyze the extent of institutional support, viz. information, credit and market access in the tribal dominated districts. Findings of the study reveal that 87.80% respondents owned/use mobile phone, whereas extension contact was found to be very poor in the study area as a whole. Awareness and usage of formal information sources reveal that about one fourth (24%) were aware of Indian Council of Agricultural Research (ICAR) centres, whereas only 17.6% respondents were aware of Krishi Vigyan Kendra and Agricultural University/line department. Access to these institutions was found to be poor owing to poor connectivity and remoteness of the area. About 43% respondents had no access to institutional credit, whereas informal sources of rural credit account for about 21.8% of the loan volume to tribal households and kins/relatives (41.4%) were the largest source of informal credit. Marketing and associated infrastructure were identified as major determinants of their livelihood diversification.

Key words: Credit, Information, Market access, Shifting cultivation, Tribal

Information is an indispensable factor for promoting the development of society. Kemp (1976) observes that information has been called, the fifth need of man, ranking after air, water, food, and shelter. Luck *et al.* (1981) add that information is the life blood of planning, directing, and controlling any enterprise. It makes the satisfaction of the demands of the population possible in an efficient way. The present age is rightly characterized as the age of information, where its success in any activity is based on the amount and accuracy of information available. The fact that information is a key resource for the progress and development of a nation (Raina 1998) is nothing but the socio-economic, cultural, and political development of its citizenry. Knowledge and information are fundamental in supporting livelihood security and rural development. Communication initiatives are increasingly recognized as effective means to promote capacity development, empowerment and social change, and FAO has been active in this area for numerous decades. Communication initiatives also foster the blending between local/indigenous knowledge and 'technical' information for development. Indeed, recognition of the resourcefulness of traditional agricultural knowledge systems and their complementarity with 'scientific' innovation systems is a growing area of interest today (FAO 2015). Communication can generate capacity development, empowerment and positive social change. Access to information, combined with the preservation of traditional skills and knowledge systems, can bring novel solutions to food insecurity, providing effective avenues for sustainable development. Information is a basic and fundamentally important element in any development activity. Finding ways to harness it more effectively to assist those making decisions affecting the sustainability, productivity and profitability of their livelihoods is a priority concern (DFID 2000, 2002). In addition, the promotion of sustainable rural development strategies, including sound management of natural resources, is a central concern of agricultural information systems.

Economic opportunity for sustainable livelihood is one of the major constraints to addressing the needs of indigenous and tribal people. Besides they have lack of access to markets, financial resources and stable sources of production to alleviate poverty and food insecurity. Creating income-generating opportunities and building long-term capacities for stable rural employment are central components of FAO's work and an objective of sustainable and self determined development (FAO 2015). Providing

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access to markets, financial resources and stable sources of production remain a major challenge to the alleviation of poverty and food insecurity. Shifting cultivation is a major source of livelihood among the upland tribals of NEH. Besides, economic, cultural, ecological and political factors would also cause the decline or disappearance of shifting cultivation (swidden agriculture) worldwide (Van *et al.* 2013) such as the access to market, distance to major roads, off-farm job opportunity, ethnic minorities and land policies. In a meta-analysis of global assessment on the trends and drivers of changes in swiddening, it states that the access to markets and conservation policies and practices have exacerbated the decline of swidden agriculture (Van *et al.* 2012). Evidence from north-western Vietnam (Chi *et al.* 2013) underlines that accessibility or distance of ethnic groups to major roads will influence their attitude towards subsistence agriculture. Local residents living close to major roads tend to develop market-oriented farming practices to improve their income sources, while those who reside in remote mountainous areas are forced to rely on swidden cultivation. This paper focuses mainly on extent of access to information, credit and market support in tribal dominated area/districts affected with the shifting cultivation system of agriculture.

MATERIALS AND METHODS

The present study was conducted during 2016-17. Out of total eight states of the region, six north eastern hill states included in the present study were Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. From each state, one district enlisted under Backward Regions Grant Fund and having the highest density of tribal families was purposively selected for the study. From Upper Subansiri (Arunachal Pradesh), Churachandpur (Manipur), West Garo hills (Meghalaya) and Mon (Nagaland) a sample of 100 tribals practicing shifting cultivation from each of the selected districts were randomly sampled and from Saiha (Mizoram) and Dhalai (Tripura) a sample of 50 tribals from each were selected randomly for the study. Thus the total sample drawn for the present investigation was 500. The field data was collected using structured interview schedule, whereas a three-point Likert scale (1-no constraint, 2-minor constraint, and 3-major constraint) was used to measure the constraints perceived by the upland tribal of the region. The focus group discussions with a variety of stakeholders in the study area were also conducted in the study for triangulation of respondents' responses.

RESULTS AND DISCUSSION

Demographic characteristics of respondents

Table 1 summarizes the demographic characteristics of tribal households such as age, education, household size etc. Table 1 shows the profile of respondents from six north eastern hill states, viz. Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. It was found that majority of the respondents selected under the study were from middle age group (55.20%) followed by old (29.40%) and young age (15.40%) group engaged in shifting cultivation (*Jhum*). Educational status of the respondents reveals that maximum of them were educated up to primary level (52.80%), whereas only 19.20 % had high school level education, however, significant proportion (28%) of respondents could not avail formal education (according to 2011 Census, literacy rate among Schedule Tribes in India was 59%). The highest majority (above 80%) of the respondents had medium family size and owned *kutcha* house, whereas the all India percentage of the people owned *kutcha* house was only 46.9% (Census 2011). In case of land holding size, 39.75 per cent respondents had 1 to 2 ha of land and 36.75 % had semi medium size land (3-4 ha). Remaining 14.75, 7.75 and 1.00% respondents had marginal (0.05 to <1), medium (4 to <10) and large (>10) size land respectively. It was found that majority (78.20%) of the respondents had monthly income ranges from ₹3715 to 17487 while 12.60 and 9.20 % had income above ₹ 17487 and below ₹ 3715 respectively.

Table 1 Socio-economic profile of the respondents (n=500)

Category	Frequency	Percentage
Age		
Young (18 to 35 Yrs)	77	15.40
Middle (36 to 50 Yrs)	276	55.20
Old (Above 50)	147	29.40
Educational status		
Illiterate	140	28.00
Primary	264	52.80
High school and above	96	19.20
Family Size		
Small (<4)	41	8.20
Medium (4 to 8)	404	80.80
Large (>8)	55	11.00
House type		
Pucca	84	16.80
Kutcha	416	83.20
Land holding (ha)		
Marginal (0.05 to < 1)	60	14.75
Small (1 to < 2)	204	39.75
Semi medium (2 to < 4)	200	36.75
Medium (4 to <10)	32	7.75
Large (> 10)	4	1.00
Monthly income (₹)		
₹ < 3715	46	9.20
₹ 3715 to 17487	391	78.20
₹ > 17487	63	12.60

As the level of aspiration concerns with the future level of possible achievement, socio-economic development and household security (Kumar and Siddaramaiah 1996,

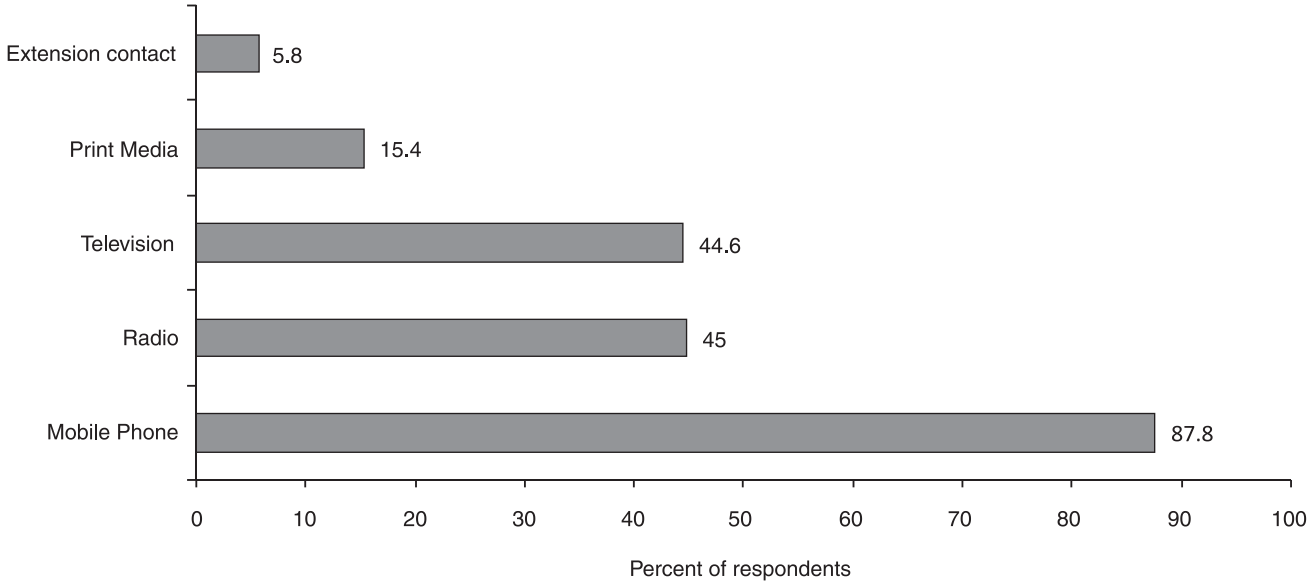

Fig 1 Access to mass media and cosmopolite sources of information by the respondents.

Satyanarayan and Jagadeeswary 2010), therefore, it implies that higher the level of aspiration, the higher would be the livelihood assets status. The data in Table 2 reveals that majority (71%) of tribal had medium level of aspiration followed by 13.4 % with high aspirations level and only 15.6 % of them showed low aspiration.

Access to mass media and cosmopolite source of information

Information can support sustainable livelihoods in a number of ways. The multiple uses for information correspond to the diverse needs of different users, their assets and their opportunities. Access to mass media and cosmopolite sources of information by the respondents is presented in Fig 1.

Fig 1 reveals the mass media exposure and access to cosmopolite sources of information by the respondents. It is clear from the data that access to print media was poor, however, about half of the respondents have access to radio and television. Surprisingly, 87.80 % of the respondents owned/use mobile phone. Extension contact was also found to be very poor in the study area as a whole. As reported by the TRAI (2016), the total mobile phone users in north eastern states of Himalayan region of India was 4.1 million. A study conducted among the Garo tribal farmers (n=250) in the north-eastern Himalayan region of India found that mobile phones are owned by everybody, while 71 (34.63%) farmers are having featured phone and 134 (65.37%) farmers owned smart phone. Majority of them (65.37%) use their mobile phone for listening music followed by 62.92 % farmers use for watching videos and 21.46 % farmers use for listening to radio. The younger generations of Garo tribe are more technology savvy and inclined to the use of mobile phone for different purpose and even agricultural purpose as well. Hence, mobile based agro-advisories has real potential to come out as alternate extension system for dissemination of farm information to the farming communities in the region, which will eventually result in increasing mobile use efficiency of the farmers in gathering farm information and ultimately help the farmers in the region to access right farm information at right time (Lahiri *et al*. 2017).

Table 2 Aspiration level of the respondents (n=500)

Category	Frequency	Percentage
Low	78	15.6
Medium	355	71.00
High	67	13.4
Total	500	100

Awareness and usage of formal information sources by the respondents

In order to develop location specific technologies, human resource and dissemination of farm innovations, the agricultural institution's arrangement are moderately good in the North-Eastern Hill States. These institutions in NEH are committed to develop location specific technologies, human resource and dissemination of farm innovations to the end users. It comprises ICAR Research Complex for NEH Region (Estd. 1975) with 6 regional centers, a Central Agricultural University (Estd. 1993) having campus/colleges spread over six North-Eastern Hill States and a network of 52 Krishi Vigyan Kendras covering all the potential districts of NEH region. Access to these institutions for information, agricultural inputs and skill development by the respondents are presented in Table 3.

The findings on awareness and usage of formal information sources by the respondents reveals that about one fourth (24%) were aware of Indian Council of Agricultural Research (ICAR) centres, whereas only 17.6% respondents were aware of Krishi Vigyan Kendra and Agricultural University. Access to these institutions was

Table 3 Awareness and usage of formal information sources by the respondents

Item	Frequency	Percentage
Awareness about ICAR	120	24
Access/visit to ICAR centers	33	6.6
Purpose of visit (n=33)		
Usage of organic fertilizer	1	3.03
To receive cattle	1	3.03
Training	20	60.60
Exhibition	10	30.30
Poultry inputs	1	3.03
Periodicity of visit		
Monthly	0	0
Quarterly	24	72.72
Others (once/annual)	9	27.27
Demonstration conducted by ICAR at farmers field	3	0.6
Receipt of input from ICAR centre	28	5.6
Adoption of the technology	0	0
Awareness about other institutions (KVK/AU/LD)	88	17.6
Access to other institutions (KVK/AU/LD)	51	10.2
Training attended at KVK/AU/LD	64	12.8

found to be poor. In case of ICAR only 6.6% respondents had visited these centres once in a quarter or annually/ once, mainly to attend training programme or exhibition. According to the data, so far none of the respondents had adopted any improved technology developed and introduced by the ICAR for adapting shifting cultivation. Weak extension linkage and poor access to required agricultural knowledge and information compel them to stick to their old traditional methods of farming system. Demographic and socio-economic characteristics of the respondents, lack of approach roads for facilitating community visit of extension workers and remoteness contribute to low usage of agricultural institution information sources. It is imperative therefore for these institutions to extensively use mobile phone and mass media particularly radio and television for information dissemination among the tribals.

Market access

Forest-based livelihood strategies are conditioned by market remoteness and forest proximity. Remoteness also limits opportunities for alternative employment. Commercial trade of agriculture and forest products often requires long journeys to transport produces to markets, with high transactions costs in the form of transportation expenses, losses to perished product, official and unofficial tariffs, taxes and bribes, and uncertain demand and prices when they reach market (Belcher 2014). As upland agriculture are mainly performed in remote forest hence, it was imperative to study about market remoteness and forest proximity.

In regard to distance from *jhum* land to market place the maximum (71.40%) respondents revealed that the distance to market (Table 4) was up to 10 km followed by 18.20% were situated up to 11-20 km from market place. Only 10.40 % respondents reside at a distance of 21-30 km from market place. In case of distance to District Headquarters (DHQ), 36.80 % respondents were 21-40 km away from DHQ while 23.80 % respondents reside at a distance of 41-60 km from DHQ. Only 18% respondents reported the distance up to 20 km from DHQ.

Access to credit

Table 5 reveals that about 43% respondents had no access to credit from any sources, whereas informal sources of rural credit account for about 21.8% of the loan volume to tribal households, and kins/relatives (41.4%) were the largest source of informal credit. Friends, who usually do not charge interest, provide 32.4% of informal loans for a while. About 10% respondents had borrowed money regularly from Village Headman. Only 11.84% respondents accessed credit from formal sources. Access to institutional and non-institutional credit differs in the context of land size. Access to formal credit is not scale-neutral, despite several measures to promote financial inclusion in India. Large segments of agricultural households still remain outside the formal credit system. Poor families often are excluded from formal credit markets because they lack collateral or

Table 4 Distribution of respondents based on distance to market and district headquarters (n=500)

Distance in KM	Frequency	Percentage
Distance to market		
Up to 10 km	357	71.40
11-20 km	91	18.20
21-30 km	52	10.40
Distance to district headquarter		
Up to 20 km	90	18.00
21-40 km	174	34.80
41-60 km	119	23.80
61-80 km	87	17.40
Above 80 km	27	5.40

Table 5 Access to credit by the respondents (n=500)

Source of credit	Frequency		
	Often	Sometime	Never
Village headman	49 (9.8)	51 (10.2)	264 (52.8)
Self help Groups	19 (3.8)	27 (5.4)	279 (55.8)
Kins/relatives	24 (4.8)	207 (41.4)	146 (29.2)
Friends	17 (3.4)	162 (32.4)	171 (34.2)
Bank	23 (4.6)	59 (11.8)	236 (47.2)

Figure in parenthesis indicates percentage

Table 6 Constraints in livelihood diversification (n=500)

Constraint	Item Mean	Rank
Lack of proper road	2.48	1
Lack of good market price for the produce	2.45	2
Lack of market access	2.37	3
Lack of access to extension service	2.35	4
Lack of loan facility	2.24	5
Unavailability of credit facility due to common property land resources	2.12	6

guarantors (Ray 1998, Shoji *et al.* 2012).

Problems in livelihood diversification

Agricultural diversification is an important mechanism for economic growth. It depends, however, on there being opportunities for diversification and on farmers' responsiveness to those opportunities (FAO 2002). Changing consumer demand, changing demographics, changing marketing opportunities and diversifying from the monoculture of traditional staples can have important nutritional benefits of agricultural diversification for farmers in NEH region. However, upland tribal are often not able to construct productive strategies to diversify their livelihood because of overwhelming odds. In order to secure people's livelihood, it is imperative to determine as to what exactly are the inhibiting factors so that necessary interventions may accordingly be made to create enabling environment.

Table 6 reveals that among several impediments, poor infrastructural facility, viz. lack of proper road (MS 2.48) emerged as the most important constraint that hinders the different options of livelihood diversification followed by lack of good market price for the produce (MS 2.48). Again access to market and extension services were other important impediments as perceived by the respondents towards diversification of tribal livelihood. Credit facility was perceived as another deterrent. It may worthy to mention here that the Backward Regions Grant Fund Programme (BRGF), launched in 2007, signifies a new approach to addressing persistent regional imbalances in development however, level of people's awareness about the programme was low and overall amount of grants is too small to meet the infrastructural deficits of the backward regions (Planning Commission 2014).

Eventhough great strides have been made in the eradication of poverty, the tribal people of NEH are still isolated and facing constant glitches of communication and transportation, inaccessible institutional credit, market support etc. which further increases the gap between traditional and scientific agriculture. Providing access to markets, financial resources and stable sources of production remain a major challenge to the alleviation of poverty and food security. Efforts to create enabling environments for sustainable and autonomous living through activities such as entrepreneurial training and institutional capacity need to revamp. Development of tribal in the region by strengthening the institutions concerned is essential with the objectives include the generation of greater income, the diversification of livelihood options and the creation of more equitable and accessible opportunities for making a living.

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