

Constraints and Prospects to Livelihood Diversification in Kohima and Phek Districts of Nagaland, India: Analysis using Response Priority Index

Kevikuonuo*

Research scholar, Department of Economics, Nagaland University, Lumami - 798627, Nagaland, India.

ORCID ID: <https://orcid.org/0009-0000-5921-9558>

Prof. T. Zarenthung Ezung

Professor, Department of Economics, Nagaland University, Lumami- 798627, Nagaland, India.

*Corresponding Author Email: avikuo21@gmail.com

Abstract : *Livelihood diversification remains an important strategy that is adopted by individuals/households all over the world, which affirms that a household can escape poverty and enhance its well-being. In rural areas, livelihood is highly erratic and risk-veiled due to the differences in socio-economic, demographic, and geographical conditions, which generate distinct constraints to livelihood diversification. Therefore, it is crucial to understand the fundamental constraints of livelihood diversification to identify the challenges of rural development and interceding to elevate the people's livelihood. This paper explores some of the main constraints and the prospect for diversification by recording their priority for each constraint. The study was conducted in Nagaland, constituting 663 households randomly selected as the sampled households from four villages of Kohima district and four villages of Phek district. The study revealed that the significant constraints in the study area were lack of proper guidance and education, lack of family labor, health conditions, old age, lack of proper marketing facilities, credit and time constraints, and non-availability of land. Thus, concerned stakeholders should pay close attention to these issues and play a facilitator's role in promoting investment and better outreach training programs to ensure a secure and sustainable livelihood.*

Keywords: Constraints, Diversification, Livelihood, Prospects, Rural

JEL code: C13, C43, J21, J24, O3, O18

INTRODUCTION

Livelihood practices keep changing from time to time, owing to the continuous dynamic nature of development and structural transformation. Agriculture, being vulnerable to climate change, insecurity, and decreasing farm sizes, which results in low productivity, has failed to guarantee sufficient livelihood. It is a widely known fact that agriculture alone is incapable of providing sufficient employment opportunities for the growing population (G. S. Mehta, 2002). In order to achieve a stable economy, it is crucial to reduce dependence on the traditional agriculture system. Diversification, therefore, extricates a household to adapt to this incessant perplexity, keeping livelihood sustainable and maintaining a level of affluence and comfort of life.

Livelihood diversification remains an important strategy that is adopted by individuals/households all over the world, which affirms that a household can escape poverty and enhance its well-being. It can be considered a characteristic of economic development that exhibits an expansion in the livelihood activities of the people, including both on-farm and off-farm activities, which are undertaken to yield auxiliary income.

In rural areas, livelihood diversification is a means to secure a living. Rural areas are vulnerable to shocks that disrupt their chart of income and consumption flow, depletion of household resources, increase inequality, and intensify the poverty level for the already poor households (Mudzielwana et al., 2022). As a result, diversifying livelihood activities enables households/individuals to cope with these associated shocks and improve their welfare. Thus, on-farm and off-farm sectors have become an essential element of livelihood for rural households. In other words, rural households make their diversification decisions out of desperation rather than opportunity.

However, the portfolio of multi-activity is tempered by different opportunities and constraints depending on region by region and household by household (G. Mehta et al., 2022). Livelihood is highly erratic and risk-veiled in rural areas due to the socio-economic, demographic, and geographical conditions generating distinct constraints and prospects on livelihood diversification. Therefore, understanding

the basic constraints of livelihood diversification is crucial for identifying the challenges of rural development and interceding to elevate the people's livelihood. This paper explores some of the main constraints and the prospect for diversification by recording their priority for each constraint.

Like other nations, households in Nagaland diversify their livelihood through non-farm, off-farm, and farm activities. Non-farm activities are activities in secondary and tertiary sectors, which are non-agricultural, and off-farm activities are temporary wage earners that are undertaken outside one's farm/household. Farm activities are agricultural or farming activities, including floriculture and animal husbandry (Barrett et al., 2001). As there are limited studies that focus on the problems of multiplying livelihood activity in the study area, this study is aimed at filling that literature gap.

MATERIALS AND METHODS

The study was conducted in two districts of Nagaland, India. Firstly, two districts, Kohima and Phek, were randomly selected. Then, four blocks from each of the two districts were selected, and one village from each block was selected randomly as the study area. Finally, 10 percent of households from each village were selected randomly as the sampled households. Thus, 663 households were selected for the present study.

To identify the constraints faced by households to livelihood diversification, the Responses Priority Index (RPI) was used. There was a problem while quantifying the constraints expressed by households, whether importance should be given to the highest number of responses to a constraint in the first priority or the number of responses to a particular constraint. As both lead to different conclusions, to resolve this problem, a product of the Proportion of Responses (PR) and Priority Estimate (PE) was used to construct the Responses Priority Index (RPI) (Alidas et al., 2020; G. Mehta et al., 2022; Rao, 2011). Where PR for the i^{th} constraint gives the ratio of the number of responses for a particular constraint to the total responses. The equation will be shown below:

$$(RPI)_i = \frac{\sum_{j=1}^k f_{ij} \cdot X_{[(k+1)-j]}}{\sum_{i=1}^1 \sum_{j=1}^k f_{ij}} \quad 0 \leq RPI \leq 5$$

Where,

RPI_i = Response Priority Index for i^{th} constraint

f_{ij} = Number of responses for the j^{th} priority of the i^{th} constraint

$\sum_{j=1}^k f_{ij}$ = Total number of responses for the i^{th} constraint

k = Number of priorities i.e. 5

$X_{[(k+1)-j]}$ = Scores for the j^{th} priority (I, II, III, IV, V)

$\sum_{i=1}^1 \sum_{j=1}^k f_{ij}$ = Total number of responses to all the constraints

$\sum_{i=1}^1 RPI_i$ = Summation of RPI for all constraints

Here, the larger the value of RPI, the higher the value of the particular constraint hindering livelihood diversification.

FINDINGS AND DISCUSSION

The selected socio-economic characteristics of the household are described in Table 1. The distribution of households according to the age of the head of household revealed that the highest percentage of the household that is 26 percent have their head of household between 45-55 years of age in the study area. The table further shows that the majority of the heads of households are married (75.26 percent), followed by household heads who are widows (17.04 percent). Among all the heads of households, 82.05 percent are male, and only 17.95 percent are female. The distribution of households according to the educational qualification of the head of households shows that a maximum of them (36.90 per cent) have only primary education, which probably means less than nine years of schooling. The table showed that the majority of the households (that is 51.93 percent) have 3 to 5 members, and almost 89 percent of the households have land ownership. However, these lands are found to be either too small, uncultivable, or located far from their residents. The distribution of households according to the distance from the nearest market revealed that about 67 percent of the households have a market with a walkable distance. It is also seen that as much as 94 per cent of the household have bank accounts whereas only 75 per cent have savings. However, it is seen that only 11 percent of the households have availed of loans, indicating that the rest, 88 percent, have never availed of loans. The study also reveals that the highest percentage of the loans were availed for maintaining their lifestyle and personal gain, with only around 26 percent for livelihood activity purposes.

Table 1: Socio-economic characteristics of the households

Variables	Frequency	%
Age group		
25-35	83	12.52
35-45	146	22.02
45-55	177	26.70
55-65	159	23.98
65-75	56	8.45
75-85	33	4.98
Above 85	9	1.36
Marital Status		
Married	499	75.26
Unmarried	34	5.13
Divorced	17	2.56
Widow	113	17.04
Gender		
Male	544	82.05
Female	119	17.95

Education Qualification		
Illiterate	63	9.50
Primary	244	36.80
Highschool	92	13.88
Higher sec	120	18.10
Graduate	109	16.44
Pg	35	5.28
Household size		
<3	164	24.74
<6	341	51.43
<9	142	21.42
9 & above	16	2.41
Market Distance		
Walkable	448	67.57
Non-walkable	215	32.43
Land Ownership		
Yes	590	88.99
No	73	11.01
Bank Account		
Yes	625	94.27
No	38	5.73
Saving		
Yes	501	75.57
No	162	24.43
Loan		
Yes	75	11.31
No	588	88.69
Reason for Loan		
Car loan	15	23.44
Business	14	21.88
Children Education	4	6.25
Personal purpose	5	7.81
House construction	23	35.94
Livestock activities	3	4.69

Source : Field survey (2020-2021)

Number of livelihood activities of the households

The distributions of households according to the number of employment activities in a household are shown in Table 2. The table reveals that almost 58 percent of the total households in the study area have only up to two employment activities. These activities are mostly taken up by the parents of the household, signifying that there is very low or no diversification. It can also be seen from the table that there are households with up to ten employment activities. Overall, it can be said that there is low or moderate diversity in the study area. Given this, the catalyst for the non-diversification of households was brought out to have an insight into it, which can enable an intervention for improving the adaptation capability.

Constraints to Livelihood Diversification

Credit refers to the stock of money households save, the assets they possess, or their capability to access financial services in any way (Bekalu et al., 2019). The fear of taking risks arises when there is a lack of asset base. It can be observed from Table 3 that the lack of credit facilities, which stands in rank number 1, is the primary constraint for diversification in the study area with an index value of 0.55,

which hinders households from setting up self-employment activities or any start-up business.

Mittra & Akanda (2019) found that a person with higher income generating knowledge or experience will have higher livelihood diversification. According to Bekalu et al., (2019), training and awareness are two essential steps in motivating households, especially in rural areas, to diversify their livelihood strategies. In the study area, the majority of the respondents stated lack of proper guidance or knowledge as one of the significant constraints to livelihood diversification, which ranks 2 with an index of 0.38. Respondents are mostly unaware of the opportunities or portfolios that are feasibly available to them. And in the absence of such knowledge, they remain stagnant and naive of all the perks and benefits.

Time constraints was also one of the major constraints in the study area (0.28 index) capturing the third rank. Though people are willing and want to go for alternative income sources, they cannot make adequate time to work on it. To diversify livelihood activities, proper time management also plays a vital role. Upon observation, it can be seen that inadequate family labour, referring to the situation where more members of the family are dependent on age group or school-going, was also found to be a main constraint to livelihood diversification (0.20) as a large family does not necessarily mean more diversified.

The marketplace is the platform where there is interaction between the customer and the seller, as well as the social system. Lack of marketing facilities in terms of poor infrastructural development for local goods was also a huge barrier to livelihood diversification in the study area with an index value of 0.19, as this limits their selling options. Good infrastructure helps directly or indirectly in diversifying livelihood activities, reducing vulnerability, and achieving livelihood outcomes (Saha & Bahal, 2012).

Non-availability of land creates a hindrance to livelihood diversification in the study area with a 0.12 index. With the increase in population, there is a decrease in size in the fragmentation of land, which is leading to low productivity. Also, with the problem of land located far away from their residence, commercial cropping becomes impossible. Hence, people are unable to diversify in the farm sector. High age and health issues are also found to have lower ranks with index values of 0.04 and 0.03, respectively. This shows that compared with other types of assets, such as social assets, natural assets, etc., human assets are found to be the least challenging factor in diversifying livelihood in the study area.

Table 2: Distribution of households according to the number of activities

No. of employment activities	1	2	3	4	5	6	7	8	9	10
No. of household	126	255	139	69	51	11	6	3	1	2
Percentage	19.00	38.46	20.97	10.41	7.69	1.66	0.90	0.45	0.15	0.30

Source: Field survey (2020-21)

Table 3: Constraints to livelihood diversification in the study area

Sl. No	Constraints	Number in respective priorities					Total responses	RPI	Rank
		I	II	III	IV	V			
1	Lack of proper guidance/ knowledge	70	63	12	12	7	164	0.38	II
2	Inadequate family labour	52	29	6	4	2	93	0.20	IV
3	Health issues	9	3	3	1	4	20	0.03	VIII
4	Age	8	8	1	0	3	20	0.04	VII
5	Lack of credit facilities	44	48	31	9	3	135	0.55	I
6	Lack of proper marketing facility	37	37	20	5	0	99	0.19	V
7	Non-availability of land	2	8	8	13	19	50	0.12	VI
8	Time	40	65	4	2	2	113	0.28	III

Source: Field survey (2020-21)

Constraints in Kohima district

As shown in Table 4, the lack of credit facilities in the number one rank with a 0.57 index is the major constraint that hinders people from diversifying their livelihood activities in the Kohima district. Also, lack of time and poor guidance regarding innovations, technologies, institutes, etc., in the second and third rankings were found to be considerable constraints with index values of 0.50 and 0.41, respectively.

One main problem of livelihood diversification found is inadequate family labour, which is in the fourth rank with an index of 0.25. The contribution of family members also plays a vital role in diversifying livelihood. The absence of adequate family labourers, such as households that constitute more of a dependent population or fewer family members where the available member has to engage in unpaid family work.

Good infrastructure or marketing facilities are essential ingredients for livelihood diversification. Its existence allows the exchange of products at negotiable prices and the subsistence of products. The absence of a developed market for local finished goods and storage purposes emerges as one major constraint to livelihood diversification, with an index of 0.20 in the fifth rank.

There are also households that are unable to diversify their

livelihood activities in the farm sector because they do not possess any land or cultivable land. Thus, the non-availability of land is a constraint found in the Kohima district with an index of 0.09. Also, old age and poor health conditions are two main constraints perceived by households with 0.05 and 0.04 indexes, respectively.

Constraints in Phek district

It is evident from Table 5 that in the Phek district, the lack of credit facilities scoring rank one is the main constraint in diversifying their livelihood activities with an index value of 0.87. Secondly, a lack of proper guidance or proper knowledge on how to go about diversifying livelihood activities is found in the second rank with a 0.67 index value. Thirdly, as land plays a vital role in the livelihood of rural households, the absence of land for cultivation or other farming activities poses a massive hindrance to diversifying livelihoods (0.39). Fourthly, the lack of marketing facilities in terms of the local market for their produce is a significant barrier to livelihood diversification in the Phek district, with a 0.36 index. There is a lack of proper infrastructure with storage facilities and also no proper marketing area where a person can sell their farm products, handicrafts, or any locally made finished goods. Fifthly, households with family

Table 4: Constraints to livelihood diversification in Kohima district

Sl. No	Constraints	Number in respective priorities					Total responses	RPI	Rank
		I	II	III	IV	V			
1	Lack of proper guidance/ knowledge	54	48	8	0	0	110	0.41	III
2	Inadequate family labour	35	25	3	0	0	63	0.25	IV
3	Health issues	9	2	1	0	4	16	0.04	VIII
4	Age	8	4	0	0	3	15	0.05	VII
5	Lack of credit facilities	34	38	13	0	0	85	0.57	I
6	Lack of proper marketing facility	19	22	12	0	0	53	0.20	V
7	Non-availability of land	2	7	2	5	4	20	0.09	VI
8	Time	37	59	3	2	2	103	0.50	II

Source: Field survey (2020-2021)

Table 5: Constraints to livelihood diversification in Phek district

Sl. No	Constraints	Number in respective priorities					Total responses	RPI	Rank
		I	II	III	IV	V			
1	Lack of proper guidance/ knowledge	16	15	4	12	7	54	0.67	II
2	Inadequate family labour	17	4	3	4	2	30	0.26	V
3	Health issues	0	1	2	1	0	4	0.03	VIII
4	Age	0	4	1	0	0	5	0.05	VII
5	Lack of credit facilities	10	10	18	9	3	50	0.87	I
6	Lack of proper marketing facility	18	15	8	5	0	46	0.36	IV
7	Non-availability of land	0	1	6	8	15	30	0.39	III
8	Time	3	6	1	0	0	10	0.10	VI

Source: Field survey (2020-2021)

members who are below or above the working age or are students also face the problem of inadequate family labor (0.26) to diversify their livelihood activities. Lastly, time constraints, old age, and health issues are also barriers to diversifying livelihood activity with indexes of 0.10, 0.05, and 0.03, respectively.

Prospects of Livelihood Diversification

Despite the vast potential and capability to diversify the livelihood activities in the study area, specific issues are found preventing households from diversifying their livelihood activities.

The respondents lack knowledge of many new livelihood activities available to them feasibly. Lack of knowledge about financial credibility was also seen to be a major hindrance in the study area. The people are unaware of the schemes or different government subsidies, such as machinery, tractors, seedlings, zero-interest loans, etc., that are available to them through various programs. Diversification options are limited to many households because of a lack of credit for start-up and self-employment activities. Similar results were found by Akintunde et al., (2021) and Khatun & Roy (2012), who identified the lack of credit, training, awareness, and infrastructure to be some of the major constraints to livelihood diversification. Small-sized fragmentation of land and landless households also pose a great hindrance to some households' livelihoods as they are unable to take up farm-related activities that are rent-free.

To make evident and accessible livelihood opportunities, proper training and guidance should be given to the people at all levels of society. Vocational and practical training

should be provided for employment opportunities in all sectors. Government programs and training on the execution of modern machinery and technologies, earning platforms, and network-building techniques should be given to all age groups. To maximize the benefit for the farm sector, proper use of pesticides and extensive hygienic training should also be provided.

Proper career guidance should also be given to the youths to enable them to undertake essential studies and understand the potentiality of the area by making use of the livelihood capital and utilizing the resources at an optimum level. Credit is considered as the backbone of a society. It is the main factor that keeps society running and boosts diversification. Financial assistance in the form of credit facilities with easy accessibility should be made available to rural residents.

Proper marketing facilities are a prerequisite for the development. Poor infrastructure and limited markets slow down diversification. Therefore, Proper infrastructure should be set up to encourage handmade, local, and organic products. Marketing facilities such as infrastructure, transport, and storage facilities are essential for a successful trading system. Guidance should also be given on pricing and exchange ethics to achieve business with better prices. Local groups should also be encouraged to work together to promote unity and work in diverse ways.

In order to attain a sustainable livelihood, the state has maximum potential areas for diversifying livelihood such as: a) Being an agricultural state, there is a high potential and prospects for agro-based activities. Setting up of agro-based industries will be a good investment in the long run.

b) Being a state of immense cultural diversity, handicraft and artisanship, especially traditional weaved products and woodcrafts can achieve considerable platform in the global market. c) Being a state with beautiful terrain, pleasant climate, and an incredible ancestral history, tourism is an assured sector that can help its economy grow.

CONCLUSION

The present study has shown some of the most significant constraints to livelihood diversification in the study area. To overcome such constraints and achieve their prospects, the government should increase its expenditure on social and physical infrastructures. The government as well as the NGOs should come up with various policies, which can be in the form of skill development training, financial support, and workshops that can motivate the people to take challenges and increase their livelihood sources by exploring the unexplored. Community participation is also highly recommended, where local communities and organisations should come together to encourage and achieve long-term economic growth. Especially by incorporating Traditional Ecological Knowledge (TEK) and Indigenous Traditional Knowledge (ITK) to the present and future generations to preserve the society as well as achieve a sustainable livelihood amidst modern development. Thus, concerned stakeholders should pay close attention to these issues and play a facilitator's role in promoting investment and better outreach training programs to ensure a secure and sustainable livelihood.

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