Factors Influence on Rural Livelihood Diversification and Well-Being of South Tripura District

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Abstract

This study focuses on rural livelihood diversification and well-being of the south district of Tripura. A Multistage systematic random sampling technique was used for data gathering. First, a block was selected for panchayat identification, in second stage gram panchayat and at last household level for final selection of sample. Inferential statistics was adopted to analyses data. A wealth index was calculated based study population characteristics- demographic, socio-economic, institutional factors was considered. Result shows that majority of the household was from medium wealth category. However, one - fourth family was from wealthier category. Nevertheless, only 22.5% households were in still improving stage in terms of overall household development. Further, a large section of the Scheduled Tribe (63.41%) household are in medium wealth category followed by scheduled caste (51.72%) and other backward class (48.48%). Regression analysis shows that educational qualification, food security, bank credits, households' expenditure and household location in urban areas are substantial influence factors for diversifying into high paid income and salaried job for livelihood of Tripura. Tripura has much potential to grow in primary and secondary sectors, thereby improving their technical skills, arrange warehouse, connect with potential market place for local manufacturers in order to improve living standard and rural economic growth of its rural population that can be prevent from excess rural diversification and from unstable employment in rural Tripura.

Keywords: Agriculture Sector; Livelihood Diversification; Social Groups, Social Classes

Introduction

Livelihood diversification is a vital process by which rural families construct a diverse portfolio of activities and social support capabilities to improve their standard of living [1]. The study of Food and Agriculture Organization (FAO) on farming systems show that a strong correlation between livelihood diversification and households economic stability [2]. Diversification drives to alter source of earnings for better pays which is prevailing all over the world [2,3]. Therefore, it gives additional and alternative income sources for non-farm household to ensure a significant earnings for daily needs. Further, share of non-farm income from alternative source of revenue has risen over time in developing countries [3,4]. In India, agriculture research perspective is limited in view of livelihood diversification [5]. However, studies have brought two forms of livelihood diversification into the threshold: distressed diversification, thereby the

responsible factors for diversification are the disaster or damage or any shock that the family is facing, forcing them to act accordingly, while the other one is progressive diversification regarded as an ex-ante strategy brought into fold by well-to-do households. Therefore, factors like asset ownership, market accessibility, credit accessibility, education and multiple-income, considered as an encouragement for livelihood diversification [6].

Livelihood diversification strategy upholds households' educational qualification as it significant precursor. As lack of education and financial capital is a hurdle for a household's ability to diversify. Therefore, households with higher education capable of expanding the horizons of highly remunerative livelihood activities, the ones with low level of education are constrained by the activities yielding minor returns [7,8]. Consequently, education and training skills leads to highly paid employment opportunities and upgrade earnings. Several insightful studies have laid down a strong connection amidst education and alternative diversification for non-farming activities [7-9]. Such as, study has pointed out in developing countries that in search of alternative source of income have strongly regards attaining the education radical to non-farming earnings, purposely for high wage employment [8]. Further, studies of Asian countries have established direct association between the education and pursuing the non-farming activities. For instance, Fafchamps and Quisumbing (1999, 2003) argued over the higher earnings of comparatively better educated males in rural Pakistan, via non-farming income sources, thereby driving the labour force from farming to non-farming activities [8]. Yang and An (2002), also shows an improvement in resource allocation, via proper education, between agricultural and non-agricultural activities [9].

Rural households are engaging wide range of activities purposed for expanding their sources of income. Thus, income sources may include 'farm income', 'non-farm, and 'off-farm income' [10]. For example, approximately 34% of rural households in India engage in non-farming sectors for their needs [11]. While the non-farming activities in the Eastern Himalayan regions of India generate 60% of the rural household for constant income [3]. These households' incomes are facilitated by infrastructural development, emergence of rural towns and improving accessibility to urban areas [12].

India, being one of the fastest growing economies of the world, but there is a more significant area of darkness in the rural hinterland [12-14]. About 69% of country's population lives in the rural areas and majority of people in rural areas depend on agriculture for their livelihoods. About 70 million people are without employment as per the recent National sample survey report published in 2012. Furthermore, a decline trend has been observed in the farm size in India, just below 1.2 ha in 2010-11 [13]. Over two-thirds of the household engage in cultivation over the farms measuring 1 ha or even lesser land. A comparative study shows the impact of agricultural growth in household wellbeing in contrast to any other sector [14,15].

In the northeast region of India, the state of Tripura particularly is depend on agriculture activities for their livelihood [16]. The northeastern part of India is not geographically in favor to do agriculture production thus, hilly area is left to cash crops and few wetlands are in agriculture and allied. In Tripura, rural area is most of the hilly area are full with rubber plantation. Therefore, rural inhabitants are more likely to divers in other economic activities in search of better income. Further, the share of agriculture has been declined in recent years resulting in continuous migration from the rural areas to urban areas in view of better employment opportunities and living standard [17,18]. In this context literature existing is also a big challenge and limitations for research and policy makers as well. In view of this context, present study focuses on to know factors that causes of the rural diversification in search of better earning sources. Additionally present study is also has measure well-being status of south district of Tripura.

Methodology

Study area

According to census of 2011, total Tripura population was 36,73,917 with 350 per km density and 54.24% contributes to the rural area of the state. The state has eight districts. The information was collected on various socio-economic (Figure 1) background and demographics variables: age, education, gender, Size of household, family members earning, credit from banks, reasons for livelihood diversification, and food security. Tripura is a predominantly hill area. Where the state population is mainly depending on several varieties of Kharif (Cotton, Jute, Mesta, Pulses, Oil Seeds, and Rice), Rabi (Sugarcane, Wheat) and other crops are cultivated over the agricultural land of Tripura for livelihood [12]. In this study, household's income is coined as the primary determinant for livelihood diversification. Here, the household income refers to the annual income earned by the household head. The share of different income sources was assessed in details and was tabulated accordingly.
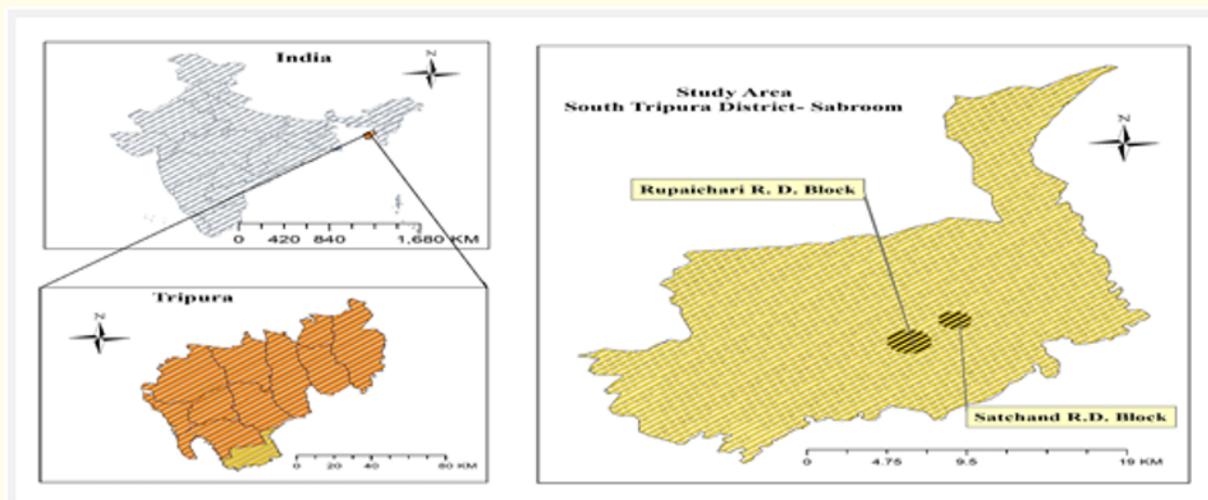

Figure 1: Study area of Tripura South district.

Technique of data and sampling design

For data collection, a multistage random sampling technique was used for this study. Stage one sample selection process was operated through rural development blocks in south district, Tripura. In stage two Under Satchand Block-Gowachand Panchayat' and 'Rupaichari Block-Manubankul Panchayat' has been finalized for data collection. In the stage three, from each Panchayat, 60 households were selected. Households sample was scattered between four villages representing significant distribution of social groups, and diverse livelihood activities. The survey was conducted between January and February of 2020. Data were collected of household respective member of each family. Primary data was collection using face-to-face interview method with structured questionnaire.

Data analysis

Wealth index was considered an essential measure for well-being assessments [20,25]. It gives a comprehensive insight of ability for a household accessibility upon basic necessities and living standard including food security. Moreover, it is used to differentiate the wealth

status of each household such as household's access to basic needs including food, electricity and amount of land owned by individual household and institution relationship. The wealth index measures relative to health but unlikely to poverty line. It is not an absolute measure of wealth or poverty of a household. Household's wellbeing gives a comprehensive understanding about household current wealth status. For more insightful information the components which are selected for calculating household wealth index, measured with different scales presented in the table 1, therefore, a novel index that has been generated as new indices using each indicators and accumulate them into scales.

Components	Indicators	Measurement Unit	Min	Max
Household arrangements	Access to latrine	Yes=1; 0 otherwise	0	1
	Access to gas stove	Yes=1; 0 otherwise	0	1
	Water access	Yes=1; 0 otherwise	0	1
	Access to television	Yes=1; 0 otherwise	0	5
	Access to radio	Yes=1; 0 otherwise	0	5
	Access to smartphone	Yes=1; 0 otherwise	0	5
	Access to electricity	Yes=1; 0 otherwise	0	5
	Purchased solar panel	Yes=1; 0 otherwise	0	1
	Livestock	No. of animals owned	0	10
Household property	House in urban area	Yes=1; 0 otherwise	0	1
	Has land in capital	Yes=1; 0 otherwise	0	1
	House in own land	Yes=1; 0 otherwise	0	1
Institutional Relationship	Institute membership	Yes=1; 0 otherwise	0	1
	Network outside	Yes=1; 0 otherwise	0	1

Table 1: Summary of variables of predictors in the analysis (n = 120).

Results and Discussion

Well-being index of rural south Tripura

Wealth Index was categorized into three forms such as wealthier, medium, and poorer among the social group of rural south Tripura (Figure 2). The wealth index was calculated based on household different social-economic, and institution relationships (Table 1) factors. The majority of the household fall into the medium wealth category. It shows about 53% of households neither affluent nor below poor. Which is silently indicate that mainstream households are middle wealthy. Further, the study shows that highest proportion (39.3%) of tribal population are in low livelihood status followed by medium (36.4%) and high (24.3%) of the state.
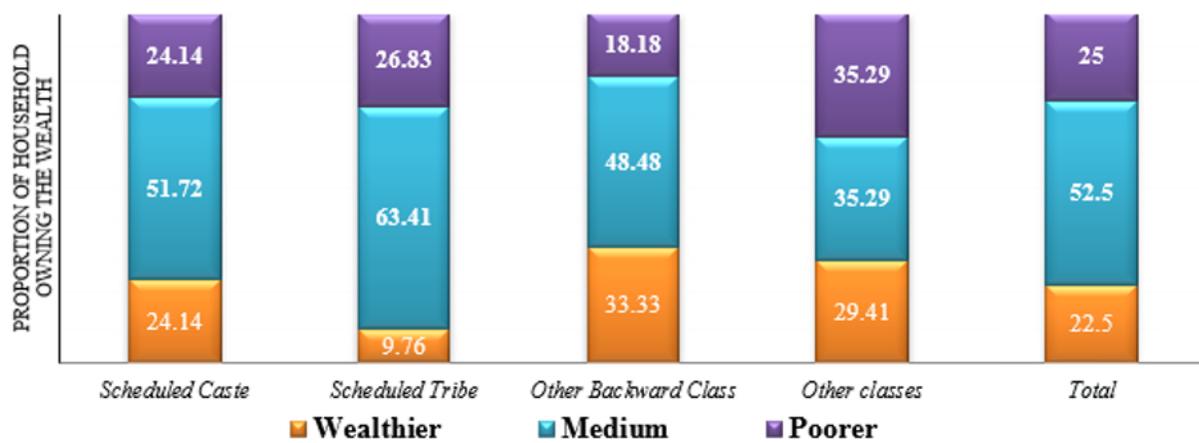

Figure 2: The proportion of wealth distribution in social groups of households in south Tripura.

Study population are in low educational background, extensive family size and most of the family members are involved in Jhum cultivation, and livestock possession [19]. It is a fact that tribal people are living in the remote area who are deprived in the development phase for years. Therefore, the tribal people are not exposed to modernization which eventually made them to live with available resources. However, non-agricultural activities like fishery sector is gradually becoming self-sufficient in production of commonly consumed fish regardless of social group of the state. However, this sector is highly unorganized, hence there is a sheer lack of data to study the returns of this livelihood. This study findings are in lined with other conducted study in Gomati district of the state [20].

The rural population in south Tripura mostly lies in the medium wealth category. On an average, most of the families have access to the necessary amenities. However, there is a vast scope of improvement in several aspects of rural development. Further, more than one-fourth of the households belong to the wealthier category of the study population. Only 22.5% of households were in underdeveloped stage in both blocks of the south district. Based on social groups, however, Scheduled Tribe (63.41%) household shows in the medium wealth category followed by scheduled caste (51.72%) and other backward class (48.48%). Nevertheless, other social classes (35.29%) are higher in terms of wealth occupied than remain social groups. Noticeably, only 9.76% of households are wealthy from the scheduled tribe family. The inter-correlation of household characteristics with the wealth status of the households present in figure 3. Low wealth status indicates the households have unstable and deficit access to basic amenities of life. On the other side, for those households having higher and sufficient wealth there are no shortage of household arrangements household builds inter-relationship with government/non-government institutions and has a better status of household property.
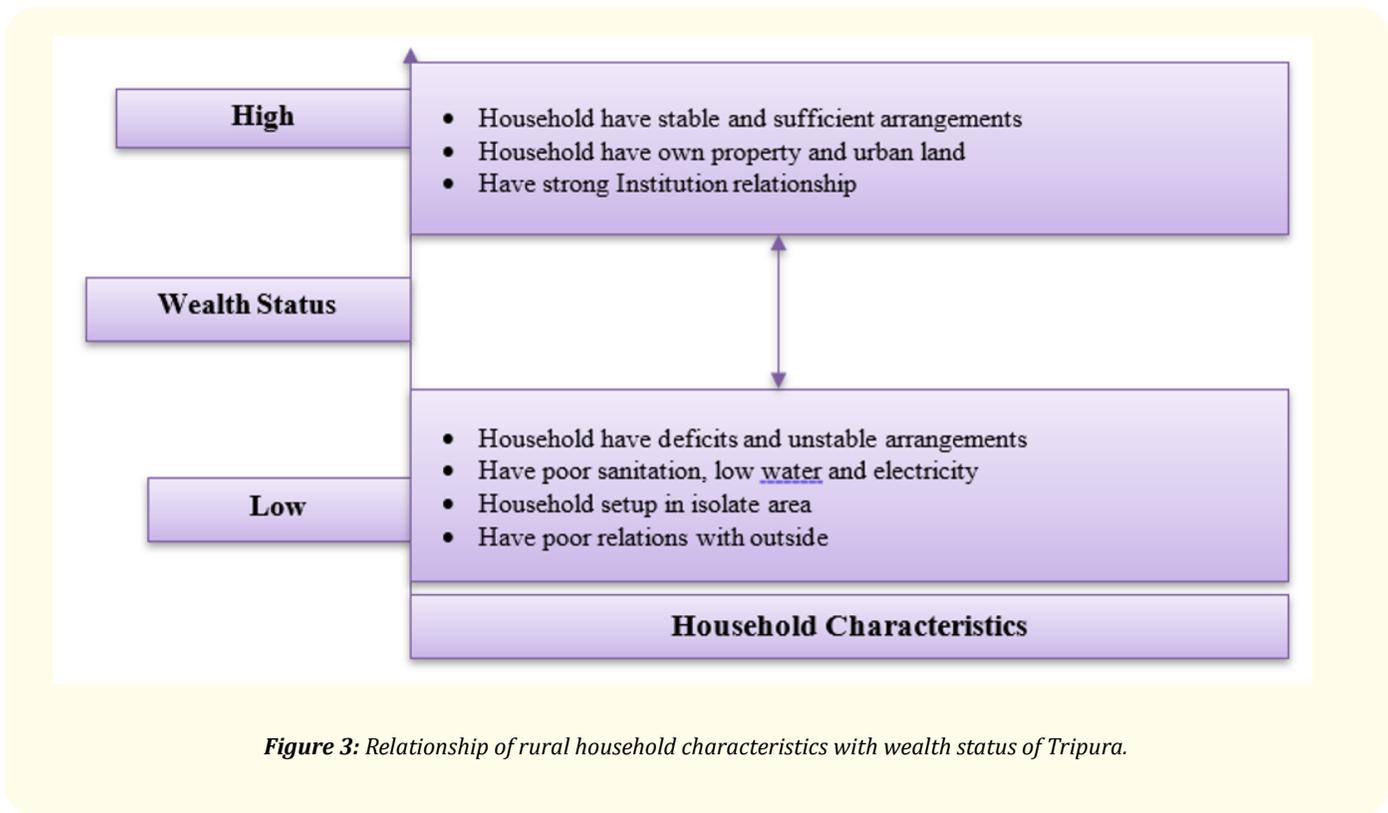

Figure 3: Relationship of rural household characteristics with wealth status of Tripura.

Determinants of livelihood diversification

Table 2 presents the result of a regression model of factors associated with income sources in Tripura. It shows that education with high income, salaried job, and business/trade has significantly associated. Which means education plays a pivotal role in diversifying in livelihood activities of the state. Further, the active family members of the households who have active involvement in earning sources and qualified can easily diverse to high return sectors. However, the family type shows that either a nuclear or joined family is not associated with high-income sources and employment. This means regardless of family forms the involvement in various livelihood activities especially high return jobs are undefined. Food security is also positively associated with the high-income and salaried jobs which shows 11% more likely to diversify into high income and more than 10% into salary jobs. Credit from the bank, more than 1.18 times higher chance to diversify into high income than salaried job and trade business. Rural youths majorly are taken loan from different sources in motive of doing study or else business to function all family works [21].

Predictors	High Income[a]	Salaried Job	Business/Trade
Household Education	1.22**	1.49***	0.82*
Number of family members	0.88*	0.91*	0.96
Family type	0.94	1.00	0.95
Food security b	1.11*	1.10*	1.01
Age group	1.00	1.00	1.00
Bank Credit	1.18**	1.05	1.12
Working age members	0.96	1.01	0.95
Household expenditure	1.05**	1.04**	1.03**
House in Capital area	1.67***	1.29***	1.3**
Constant	0.204	-0.007	0.211
R2	0.6878	0.6169	0.229
MRSE	0.275	0.2456	0.3345
Degree of freedom	9	10	10

Table 2: *Regression model for predicting livelihood diversification in high-income sectors.*
Source: Primary data, a: High income shows a combined category of job and business/trade. b: Food security indicates low medium and high.

The household expenditure is common for all families regardless of the region of the state. Therefore, it shows positively associated with high income, salaried job, any trade or business. When a family's earnings are high, their overall family expenditure is also substantially increased. The house in urban areas predicts that the probability to get high return from livelihood activities [22].

The jhum farming practices are crucial for Tripura locals. Most of rural population are still involved in these activities as their major livelihood [23]. The Jhum practice are involved site selection, slash and burn, followed by mixed cropping for a year or two and fallowing for this particular for years of recuperation of the land. Jhum cultivation is changing rapidly in many areas, partly because of population pressure and partly because livelihood strategies are diversified to include permanent cultivation of cash crops and off-farm work [24]. Population explosion and emergence of new generation of youth cultivators increasing demand for cultivable land has resulted in reduction of the cycle of cultivation from 10 - 15 years to 2 - 3 years. Recently, interventions are introduced through many programmes and schemes to uplift them and to bring them to the mainstream of development. The interventions are in transition phase and the tribal people can move forward after achieving hierarchy of needs as given by Maslow in a phase manner. Most of the Jhumia's socio-economic condition is low or medium. Hence, majority of them belong to low to medium livelihood status category [25].

Conclusion

This study has emphasized the importance of Tripura rural diversification process and well-being status. Study findings suggested that specific in south district, the majority of rural households are in middle wealth class and it is in developing stage. The study area was segregated based on social groups, among that, other backward social (OBC) are more development as the households' arrangement, institutional relationship and has strong socio-economic background in particular group as compared to their counterparts. Livelihood diversification for alternative source of income is positively linked with active household members and educational qualification. Because the qualified family members are tend to diversify their livelihood to other high income sources and satisfying with more remunerative job than less educated families. However, educated households are less likely to diversify into trade and business sectors than less qualified family of the study area. Therefore, education plays a pivotal role in accessing diversification in livelihood of rural district of Tripura. Furthermore, the number of family members are also crucial factors to diversify alter source of income for livelihoods. Credit from bank is also significant reason for diversify especially for high income and job in order to get fulfill daily needs of family demands and improved living standard of the household. Households those who have food security are intend to looking for better life and search a job or alternative high income sources. Lastly, multiple household in urban area especially near capital area are more likely to diversify into higher alternative sources of income.

Bibliography

1. Ellis F. "Survey article: Household strategies and rural livelihood diversification". *Journal of Development Studies* 35.1 (1998): 1-38.

2. FAO and World Bank. Farming Systems and Poverty - Improving Farmer's Livelihoods in a Changing World". Rome and Washington D.C (2001).

3. Reardon T., *et al*. "Household income diversification into rural non- farm activities. In: Transforming the Rural Non-farm Economy, Eds: S. Haggblade, P. Hazell and T. Reardon. Johns Hopkins University Press, Baltimore (2006).

4. Bhowmik C., *et al*. "Comparative analysis of MCDM methods for the evaluation of optimum green energy sources: A case study". *International Journal of Decision Support System Technology (IJDSST)* 11.4 (2019): 1-28.

5. Business Standard. "Pineapple growers are in 'double trouble' in Tripura" (2016).

6. Khatun D and Roy BC. "Rural livelihood diversification in West Bengal: determinants and constraints". *Agricultural Economics Research Review* 25 (2012): 115-124.

7. Chakmraborty D and Barman DR. "A Study on Impact of Motivational Factors on the Growth of Rural Entrepreneurs of Assam". *IOSR Journal of Business and Management* (2014).

8. Fafchamps M and AR Quisumbing. "Social roles, human capital, and the intra-household division of labor: Evidence from Pakistan". *Oxford Economic Papers* 55.1 (2003): 36-80.

9. Srivastava N and Srivastava R. "Women, work, and employment outcomes in rural India". *Economic and Political Weekly* (2010): 49-63.

10. Barrett CB., *et al.* "Nonfarm income diversification and household livelihood strategies in rural Africa: Concepts, dynamics, and policy implications". *Food Policy* 26 (2001): 315-331.

11. Lanjouw P andA Shariff. "Rural non-farm employment in India: Access, incomes and poverty impact". *Economic and Political Weekly* 39 (2004): 4429-4446.

12. Losch B., *et al.* "A new emerging rural world: An overview of rural change in Africa". Montpellier: CIRAD (2013).

13. Devi KG. "Economic Empowerment of Women in India". *Journal of Social and Economic Development* 11.1 (2009): 138-141.

14. Datta J., *et al.* "Livelihood Status of Tribal People Practicing Shifting (Jhum) Cultivation in Tripura State of North-East India". *Tropical Agricultural Research* (2015).

15. Debnath P., *et al.* "Resource productivity of rice cultivation in Tripura: A spatial analysis §". *Agricultural Economics Research Review* 30.1 (2017): 173-177.

16. Sinha A. "Prospect of rubber plantation in NE region with special reference to the state of Tripura. In: Seminar-cum-workshop on 'saving soil and croplands'". Soil Conservation Development, Assam, Guwahati (2007).

17. Nath S and Chaudhuri PS. "Human-induced biological invasions in rubber (Hevea brasiliensis) plantations of Tripura (India) - Pontoscolex corthrurus as a case study". *Asian Journal of Experimental Biological Sciences* 1.2 (2010): 360-369.

18. Saha B and Bahal R. "Livelihood diversification pattern among the farmers of West Bengal". *Economic Affairs* 59.3 (2014): 321-334.

19. Singh K., *et al.* "Technical Efficiency of Freshwater Aquaculture and its Determinants in Tripura, India". *The Agricultural Economics Research Review* (2009).

20. De Janvry A and Sadoulet E. "Income strategies among rural households in Mexico: The role of off-farm activities". *World Development* (2001).

21. Rahut DB and M Micevska Scharf. "Livelihood diversification strategies in the Himalayas". *Australian Journal of Agricultural and Resource Economics* 56 (2012a): 558-582.

22. Losch B., *et al.* "Structural transformation and rural change revisited: Challenges for late developing countries in a globalizing world. Agence Française de Developpement and the World Bank: Washington, DC: World Bank Publications (2012).

23. Khatun D and Roy BC. "Rural Livelihood Diversification in West Bengal: Nature and Extent". *Agricultural Economics Research Review* (2016).

24. Abeje MT., *et al.* "Exploring drivers of livelihood diversification and its effect on adoption of sustainable land management practices in the upper Blue Nile basin, Ethiopia". *Sustain* (2019).

25. Community Well-being Index 2019, Metro area and country ranking report (2019).

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