

Rural Livelihood Diversification In Tamil Nadu; With Special Reference To The Cuddalore District

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ABSTRACT

The study looked at the rural livelihood diversification of farm and non-farm households in the Cuddalore district of Tamil Nadu, as well as their socioeconomic characteristics. The farm and non-farm household respondents in the Cuddalore district of Tamil Nadu were used to create the block-wise classification. Cuddalore and Bhuvanagiri, two blocks in the selected district, have been identified based on this bloc-by-bloc classification. 257 of the 443 household respondents in the study area are from farm households, while the remaining 186 are from non-farm households. Farm households accounted for 257 respondents, while non-farm households accounted for 186 respondents. However, the majority of respondents in farm households are involved in agriculture, whereas the majority of respondents in non-farm households are involved in fishing.

Keywords: Rural, Livelihood, Diversification, Farm Households, Non-Farm Households

INTRODUCTION

Rural livelihood diversification has become critical in developing countries for reducing risk and poverty while also improving the well-being of rural households. Researchers have recently focused on this topic (Bernstein, Crow, & Johnson, 1992; Ellis, 1998; Fafchamps&uisumbing, 1999, 2003; Fafchamps& Shilpi, 2003; Haggblade, Hazell, & Brown, 1989; Micevska&Rahut, 2008; Rahut&Micevska Scharf, 2012a, 2012b; Reardon, 1997; Reardon, Berdegue.

Non-farm income accounts for 42 percent of total income in Africa, 40 percent in Latin America, and 32 percent in Asia, on average (Reardon et al., 1998). In India, the non-farm sector employs approximately 34.4 percent of rural households (Lanjouw& Shariff, 2004). Non-farm activities account for 60% of rural household income in India's Eastern Himalayan region (Micevska&Rahut, 2008). In rural Cambodia, non-farm income accounts for more than 60% of total household income (Rahut&Micevska Scharf, 2012b). In developing countries, the contribution of the non-farm sector to rural employment ranges from 20% to 50%. (Islam, 1997). In the Tejido sector of Mexico, non-farm activities account for more than half of a farm household's income (Janvry&Sadoulet, 2001).

Although rural households have multiple sources of income, most research on livelihood diversification in developing countries has focused on participation in an activity rather than the

income portfolio or livelihood strategies (Elbers&Lanjouw, 2001; Ellis, 1998; Rahut&Micevska Scharf, 2012b). Specialization is the exception to the rule of income diversification (Barrett, Reardon, & Webb, 2001). Many parents no longer want their children to grow up on a farm (Rigg, 2006).

The majority of rural households engage in multiple activities or have multiple sources of income to supplement their income. As a result, in developing countries, livelihood research must take into account that the majority of rural households rely on a portfolio of livelihood activities rather than a single activity. This source of income has been the subject of a few studies (Barrett et al., 2001; Berhanu, Colman, &Fayissa, 2007; Damite&Negatu, 2004; Dercon& Krishnan, 1996; Rahut&Micevska Scharf, 2012b).

Rural households diversify their livelihoods rather than specialise to reduce financial risk (Alderman & Paxson, 1992; Bryceson, 1996) or improve the return on labour, thereby increasing income (Rahut&Micevska Scharf, 2012b). Because credit markets, which can help with consumption smoothing, are nonexistent in rural areas, rural households are motivated to diversify outside of the farm (Binswanger &Sillers, 1983; Reardon, 1997). In Burkina Faso, for example, household capacity to cope with drought shocks in the mid-1980s was strongly correlated with the degree of non-farm diversification (Reardon, Delgado, &Matlon, 1992). Households frequently use income diversification to manage risks before they occur or to cope with shocks that have already occurred (Reardon et al., 1992; Rosenzweig & Binswanger, 1993).

The impact of the non-farm sector on poverty alleviation is demonstrated by livelihood diversification (Ersado, 2006; Ravallion&Datt, 2002; Reardon et al., 1992). In the Tejido sector of Mexico, non-farm activities account for more than half of a farm household's income, and participation in these activities thus helps to alleviate poverty (Janvry&Sadoulet, 2001). A positive relationship between non-farm activity and average welfare is one empirical regularity emerging from studies of the non-farm economy in developing countries (Barrett et al., 2001). Non-farm employment also has the potential to reduce inequity, absorb a growing rural labour force, slow rural-urban migration, and contribute to national income growth (Lanjouw& Feder, 2001). Agriculture, remittances, and rents tended to increase inequality (primarily due to unequal land ownership patterns), whereas non-farm activities and livestock-keeping tended to reduce inequality in a Pakistan case study (Adams & He, 1995).

In addition to reducing poverty, rural non-farm income is often the major source of savings for farm households in poor areas, which are then used to purchase food in difficult times (Gordon et al., 2001; Reardon et al., 1992).

LITERATURE REVIEW

Although livelihood diversification reduces risk and improves household well-being, all households can't do so. A household's ability to diversify is hampered by a lack of education and financial capital. As a result, a household's assets play a crucial role in its ability to diversify its source of income. Despite barriers such as a lack of education, access to formal credit, and telecommunication services, high-return farm activities provided an important pathway to poverty reduction in Madagascar (Stifel, 2010).

A wide range of explanatory factors for activity restructuring out of subsistence farming at the household level have been identified in the extensive literature on income diversification in rural areas (Abdulai&CroleRees, 2001; Barrett et al., 2001; Dercon& Krishnan, 1996; Ellis, 1998;

Lanjouw&Lanjouw, 2001; Micevska&Rahut, 2008; Rahut&Micevska Scharf, 2012b; Reardon et al., 1992; Smith, Gordon, Meadows, & Zwick, 2001).

Recent empirical research has looked into regional differences in livelihood strategies, their relationship with resource management technologies, and the effects of agro-ecological factors, population, and market conditions (Kristjanson, Radeny, Baltenweck, Ogutu, &Notenbaert, 2005; Kruseman, Ruben, &Tesfay, 2006; Pender, Jagger, Nkonya, &Sserunkuuma, 2004; Staal, Baltenweck, Waithaka, DeWolff, & Njoroge, 2002). The underlying theme is that natural, physical, and social capital assets are important determinants of household livelihood options.

The level of education in a household has a significant impact on its livelihood diversification strategy. Households with higher levels of education can diversify into more lucrative livelihood activities, whereas households with lower levels of education can only diversify into low-return activities. Higher education, *ceteris paribus*, leads to a greater likelihood of wage employment, according to the education and skill/training theory. A strong link between education and diversification into non-farm activities has been established in several studies (Janvry&Sadoulet, 2001; Lanjouw&Lanjouw, 2001; Micevska&Rahut, 2008; Rahut&Micevska Scharf, 2012a, 2012b; Reardon et al., 2001). Barrett et al. (2001) argue that educational attainment is one of the most important determinants of non-farm earnings, especially in more remunerative employment, in an introduction to seven studies on income diversification in rural Africa. Education is positively correlated with participation in non-farm activities, according to Asian studies. Fafchamps and uisumbing (1999, 2003), for example, claim that better-educated males in rural Pakistan earn higher non-farm incomes and divert labour away from farm activities to non-farm work. Education improves the allocation of household resources between agricultural and non-agricultural activities, according to Yang and An (2002).

RESULTS AND DISCUSSIONS

The current research looks at the socioeconomic characteristics of a group of farm and non-farm households. Table 1 shows the block-wise classification of selected farm and non-farm household respondents in Tamil Nadu's Cuddalore district. Cuddalore and Bhuvanagiri, two blocks in the selected district, have been identified based on this block-by-block classification. 257 of the 443 household respondents are from farm households, while the remaining 186 are from non-farm households in the study area.

Livelihood Diversification of Farm and Non-Farm Households

Table 1 Livelihood Diversification

Livelihood Diversification	Farm Households	Non-Farm Households	Total
Agriculture	180	12	192
Livestock	15	6	21
Bee Keeping	6	3	9
Fishing	7	42	49
Petty Shop	18	35	53
Business	10	28	38
Electrical Works	5	21	27

Maestri / Painter	8	28	36
Flower-shop	6	5	11
Gardening	2	6	8
Total	257	186	443

Source: Computed

Figures in parentheses indicate per centages

According to table 1, 180 of the 192 respondents in farm households are involved in agriculture, while the remaining 12 are involved in non-farm households. Out of 53 respondents, 18 work in farm households and 35 work in non-farm households in the petty shop, which is the second-highest occupation. A total of 49 people are engaged with fishing, with only 7 belonging to farm households and 42 belonging to non-farm households. In terms of business, only 10 of the 38 respondents (farm and non-farm) fall into the category of farm households, while 28 falls into the category of business activities. Last but not least, when it comes to gardening, only 2 respondents belong to farm households, while 6 belong to non-farm households. Furthermore, out of 443 respondents, 257 fall into the category of farm households, while 186 falls into the category of non-farm households. However, the majority of respondents in farm households are involved in agriculture, whereas the majority of respondents in non-farm households are involved in fishing.

Livelihood Diversification	Farm Households	Non-Farm Households	Total
Agriculture	93.75	6.25	43.3
Livestock	71.43	28.57	4.74
Bee Keeping	66.67	33.33	2.03
Fishing	14.29	85.71	11.1
Petty Shop	33.96	66.04	12.00
Business	26.32	73.68	8.58
Electrical Works	18.52	77.78	6.09
Maestri / Painter	22.22	77.78	8.13
Flower-shop	54.55	45.45	2.48
Gardening	25.00	75.00	1.81
Total	58.01	41.99	100

Source: Own Elaboration

Table 2 shows that a total of 93.75 percent of respondents are involved in agriculture under farm households, while only 6.25 percent are involved in non-farm households. Following that, 71.43 percent of farm households are involved with livestock, while only 28.57 percent are involved with non-farm households. Only 14.29 percent of farm households engage in fishing, while 85.71 percent of non-farm households engage in fishing. However, a total of 43.30 percent of all respondents are involved in agriculture, which includes both farm and non-farm households. Gardening, on the other hand, is only 1.81 percent of both farm and non-farm respondents.

Livelihood Diversification of Farm and Non-farm Households

Table 3 – Livelihood diversification of Farm Household

Variables	b value	S. E	t-value	p-value
Ownership of land	-0.55	0.41	-0.91	0.20
Access to credit and ability to borrow	-0.88	0.35	-1.34*	0.01
Improvement of Family Income	-0.01	0.01	-2.42**	0.02
Managing Poverty conditions	-0.02	0.01	-2.13*	0.01
Maintaining food security	-0.02	0.01	-0.60***	0.06
Encouraging Agricultural activities	-0.51	0.15	-1.25**	0.03
SHG Support	-0.51	0.21	-3.25*	0.01
Bank Support	-0.01	0.00	-4.13**	0.02
Capacity and Skill	-0.84	0.46	-0.29**	0.02
Women empowerment	0.31	0.07	1.93**	0.012
Constant	-0.41	0.09	-3.55*	0.012
R-Value	70.86			
R Squared	72.01			
F-Value	116.55			
p-value	0.000			

Source: Primary data

* 1% level of significance, **5% level of significance ***10% level of significance

Table 3 uses a multilinear regression model to examine the livelihood diversification of the selected farm household respondents in the selected region. With 16 variables, the R2 value was estimated to be 72.01 percent. Ten of the 11 variables are tuned 72.01 percent of the time and have a significant relationship with household development and livelihood diversification. Other factors account for the remaining 27.99 percent in the chosen area.

Access to credit, an increase in family income, managing poverty issues, maintaining food security, encouraging agricultural activities, SHG support, bank support, capacity and skill, and women empowerment have all been found to be positive and significantly associated with livelihood diversification and household development. It shows that a 1% increase in these input variables can result in a 1% increase in output. The F value, which is based on the R2 value, has also been found to be statistically significant among the livelihood diversification and farm household development in the study area.

Table 4 – Livelihood diversification of Non-farm households

Variables	b value	S. E	t-value	p-value
Ownership of land	-0.92	0.53	-1.93	0.13
Access to credit and ability to borrow	-0.45	0.15	-2.52**	0.02

Improvement of Family Income	0.012	0.01	3.19**	0.05
Managing Poverty conditions	-0.21	0.15	-2.55*	0.01
Maintaining food security	-0.20	0.06	-1.04**	0.02
Encouraging Business activities	-0.21	0.03	-0.23*	0.02
SHG Support	-0.01	0.01	-1.30*	0.02
Bank Support	0.31	0.16	1.91*	0.01
Capacity and Skill	0.80	0.33	2.61	0.13
Women empowerment	-0.83	0.48	-2.70*	0.01
Constant	0.41	0.27	3.21*	0.01
R-Value	68.14			
R squared	67.24			
F-Value	176.65			
p-value	0.001			

Source: Primary data

* 1% level of significance, **5% level of significance ***10% level of significance

Table 4 examines the livelihood diversification of selected non-farm household respondents in the selected region using a multilinear regression model. The 9 selected variables account for 67.24 percent of the R2 value. Nine of the 11 variables have tuned at 67.24 percent, indicating that livelihood diversification and household development are statistically significant. The remaining 32.76 percent, on the other hand, are explained by factors other than the one chosen. It is clear that the selection of nine variables, including access to credit, an increase in family income, managing poverty issues, maintaining food security, encouraging business activities, SHG support, bank support, and women empowerment, is associated with livelihood diversification and non-farm household development in a positive and significant way. It was discovered that increasing 1% of these input variables could also increase the output level. Based on the R2 value, the F value was found to be statistically significant among the livelihood diversification and non-farm household development in the study region.

While comparing Tables 3 and 4, the R2 value of farm household respondents is higher than that of non-farm household respondents. As a result, there are differences in livelihood diversification and household development between farm and non-farm respondents in the selected area.

CONCLUSION

The study looked at the rural livelihood diversification of farm and non-farm households in the Cuddalore district of Tamil Nadu, as well as their socioeconomic characteristics. The farm and non-farm household respondents in the Cuddalore district of Tamil Nadu were used to create the block-wise classification. Cuddalore and Bhuvanagiri, two blocks in the selected district, have been identified based on this block-by-block classification. 257 of the 443 household respondents in the study area are from farm households, while the remaining 186 are from non-farm households. Farm households accounted for 257 respondents, while non-farm households accounted for 186 respondents. However, the majority of respondents in farm households are involved in agriculture, whereas the majority of respondents in non-farm households are involved in fishing.

Access to credit, an increase in family income, managing poverty issues, maintaining food security, encouraging agricultural activities, SHG support, bank support, capacity and skill, and women empowerment have all been found to be positively and significantly associated with livelihood diversification and household development. It shows that a 1% increase in these input variables can result in a 1% increase in output. The F value, which is based on the R² value, has also been found to be statistically significant among the livelihood diversification and farm household development in the study area.

Access to credit, an increase in family income, managing poverty issues, maintaining food security, encouraging business activities, SHG support, bank support, and women empowerment are all positive and significantly associated with livelihood diversification and non-farm household development among non-farm respondents. It was discovered that increasing 1% of these input variables could also increase the output level. Based on the R² value, the F value was found to be statistically significant among the livelihood diversification and non-farm household development in the study region.

REFERENCES

- Abdulai, A., & A. Crole Rees. (2001). "Determinants of income diversification among rural household in Southern Mali." *Food Policy*, 26, 437–452.
- Adams, R. H., Jr. (1994). "Non-farm income and inequality in rural Pakistan: A decomposition analysis." *Journal of Development Studies*, 31, 110–133.
- Adams, R. H., Jr. & J. J. He. (1995). Sources of income inequality and poverty in rural Pakistan. Research Report 102. Washington, DC: International Food Policy Research Institute.
- Alderman, H., & C. H. Paxson. (1992). Do the poor insure? A synthesis of the literature on risk and consumption in developing countries. World Bank Policy Research Working Paper No. 1008. Washington, DC: World Bank.
- Barrett, C. B., M. B. Clark, D. C. Clay, & T. Reardon. (2005). "Heterogeneous constraints, incentives and income diversification strategies in rural Africa." *Quarterly Journal of International Agriculture*, 44(1), 37–60.
- Barrett, C. B., T. Reardon, & P. Webb. (2001). "Non-farm income diversification and household livelihood strategies in rural Africa: Concepts, dynamics, and policy implications." *Food Policy*, 26, 315–331.
- Berhanu, W., D. Colman, & B. Fayissa. (2007). "Diversification and livelihood sustainability in a semi-arid environment: A case study from southern Ethiopia." *Journal of Development Studies*, 43, 871–889.
- Bernstein, H., B. Crow, & H. Johnson. (1992). Rural livelihoods: Crises and responses. Oxford: Oxford University Press.
- Binswanger, H. P., & D. A. Sillers. (1983). "Risk aversion and credit constraints in farmers' decision-making: A reinterpretation." *Journal of Development Studies*, 20, 5–21.
- Bryceson, D. F. (1996). "Deagrarianization and rural employment in sub-Saharan Africa: A sectoral perspective." *World Development*, 24, 97–111.

- Canagarajah, S., C. Newman, & R. Bhattamishra. (2001). "Non-farmincome, gender, and inequality: Evidence from rural Ghana and Uganda." *Food Policy*, 26, 405–420.
- Corral, L., & T. Reardon. (2001). "Rural nonfarmincomes in Nicaragua." *World Development*, 29, 427–442.
- Crehan, K. (1992) Rural households: making a living. In H. Bernstein, B. Crow, & H. Johnson (Eds.), *Rural livelihoods: Crises and responses* (pp. 87–112). Oxford: Oxford University Press.
- Damite, D., & W. Negatu. (2004). "Determinants of rural livelihood diversification: Evidence from southern Ethiopia." *Quarterly Journal of International Agriculture*, 43, 267–288.
- Dercon, S., & P. Krishnan. (1996). "Income portfolios in rural Ethiopia and Tanzania: Choices and constraints." *Journal of Development Studies*, 32(6), 850–875.
- Elbers, C., & P. Lanjouw. (2001). "Intersectoral transfer, growth, and inequality in rural Ecuador." *World Development*, 29, 481–496.
- Ellis, F. (1998). "Household strategies and rural livelihood diversification." *Journal of Development Studies*, 35, 1–38.
- Ellis, F. (2000). "The determinants of rural livelihood diversification in developing countries." *Journal of Agricultural Economics*, 51, 289–302.
- Ersado, L. (2006). *Income diversification in Zimbabwe: Welfare implications from urban and rural areas*. World Bank Policy Research Working Paper No. 3964. Washington, DC: World Bank.
- Escobal, J. (2001). "The determinants of nonfarmincome diversification in rural Peru." *World Development*, 29, 497–508.
- Fafchamps, M., & A. R. Quisumbing. (1999). "Human capital, productivity, and labour allocation in rural Pakistan." *Journal of Human Resources*, 34, 369–406.
- Fafchamps, M., & A. R. Quisumbing. (2003). "Social roles, human capital, and the intrahousehold division of labour: Evidence from Pakistan." *Oxford Economic Papers*, 55(1), 36–80.
- Fafchamps, M., & F. Shilpi. (2003). "The spatial division of labour in Nepal." *Journal of Development Studies*, 39, 23–66.
- Gordon, A., K. Meadows, D. Smith, & K. Zwick. (2001). *Access to rural non-farm livelihoods: Results of preliminary field research in Rakai and Kumi districts, Uganda*, NRI Report No. 2603. Chatham, UK: NRI.
- Haggblade, S., P. Hazell, & J. Brown. (1989). "Farm-nonfarm linkages in rural Sub-Saharan Africa." *International Fund for Agricultural Development*. (2012). "Enabling rural poor to overcome poverty in Nepal." *Via Paolodi Dono*, 44-00142. Rome, Italy: Author.
- Islam, N. (1997). *The nonfarm sector and rural development: Review of issues and evidence*. Food, Agriculture, and the Environment Discussion Paper 22. Washington, DC: International Food Policy Research Institute.

- Janvry, A., & E. Sadoulet. (2001). "Income strategies among rural households in Mexico: The role of off-farm activities." *World Development*, 29, 467–480.
- Kristjanson, P., M. Radeny, I. Baltenweck, J. Ogutu, & A. Notenbaert. (2005). "Livelihood mapping and poverty correlates at a meso-level in Kenya." *Food Policy*, 30, 568–583.
- Kruseman, G., R. Ruben, & G. Tesfay. (2006). "Diversity and development domains in the Ethiopian highlands." *Agricultural Systems*, 88, 75–91.
- Lanjouw, J. O., & P. Lanjouw. (2001). "The rural non-farm sector: Issues and evidence from developing countries." *Agricultural Economics*, 26, 1–23.
- Lanjouw, P., & G. Feder. (2001). Rural non-farm activities and rural development: From experience towards strategy. *Rural Strategy Background Paper No. 4*. Washington, DC: World Bank Rural Development Family, World Bank.
- Lanjouw, P., & A. Shariff. (2004). "Rural non-farm employment in India: Access, incomes and poverty impact." *Economic and Political Weekly*, 39, 4429–4446.
- Long, J.S. (1997). *Regression models for categorical and limited dependent variables*. (Vol. 7). Thousand Oaks, CA: Sage.
- Luce, D. (1959). *Individual choice behaviour*. New York: John Wiley & Sons.
- Micevska, M., & D. B. Rahut. (2008). "Rural non-farm employment and incomes in the Himalayas." *Economic Development and Cultural Change*, 57, 163–193.
- Pender, J., P. Jagger, E. Nkonya, & D. Sserunkuuma. (2004). "Development pathways and land management in Uganda." *World Development*, 32, 767–792.
- Rahut, D. B., & M. Micevska Scharf. (2012a). "Livelihood diversification strategies in the Himalayas." *Australian Journal of Agricultural and Resource Economics*, 56, 558–582.
- Rahut, D. B., & M. Micevska Scharf. (2012b). "Non-farm employment and incomes in rural Cambodia." *Asian-Pacific Economic Literature*, 26, 54–71.