

**SUBSISTENCE FARMING
AND THE ROLE OF WOMEN IN THE UPLANDS:
A CASE STUDY OF NONGTRAI AREA IN MEGHALAYA**



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CHAPTER-VII

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

7. 1. Conclusion

To assess the degree of influence of the factors of production on an output, (paddy in our case), identification and specification of variables is carried out. Unlike the industrial production functions which have less number of input variables, farm production functions have more input variables (i.e. independent variables). If prophylactic factors like sunlight, relative humidity, rainfall, climate, etc., are taken into consideration, input variables would be much more. For industrial production function, a mechanical process exist where physical transformation of factor inputs like raw materials takes place and the service of machines and human labour enter in the production process. Biological and prophylactic processes cause problems to empiricists in specifying the economic variables as the underlying ratiocination involves phenomena such as cell mechanism, photosynthesis, nutrient absorption, hormone and enzymatic processes (Nianglang, 2010). Such variables are not measurable. Experts and farm economists find that management or entrepreneurial factor is the most difficult factor input to measure. In farming operations, a number of labourers or agricultural workers are involved in decision-making. Each of the farmers have his own creativity and skill in carrying out the farming operation, from clearing the jungles in the beginning to threshing and winnowing at the end. These works are carried out by both male and female labourers, and hence, measuring their different levels of entrepreneurial ability, intelligence level, acumen, handling ability, etc., becomes a difficult and complex exercise. To handle such non-quantifiable variables, psychologists use scaling techniques. Farm managers always presume the existence of a positive correlation between management and output because normally a small scale of production is caused by the lack of knowledge and low level of management.

From our earlier analysis we found that the females of Nongtrai are involved in all kinds of farm activities. Chi-square results in Table 6.8 indicates that there is 1% level of statistical significance with institutions and decision-making process. Thus, the main conclusions of the study are as follows:

- We accept the hypothesis that institutional factors play a significant role in women's decision-making process related to subsistence farming.
- However, we do not have enough evidence to accept the hypothesis that "women's educational status has an impact on the decision-making process in subsistence farming."
- There is no evidence to reject the hypothesis that "there is a decline in women's participation in subsistence farming." So, we accept it.

We find that females play an important role in subsistence farming. In our first model, where sex, education and decision-making process affect the output, we find that there is a strong female dominance with production. In our second model, we found that both male workers and female workers contribute to farming but females play a dominant and stronger role. However, with our findings and also in consonant with other reviews, the female workers seem to be putting in more effort than their male counterparts. From our third model, a remarkable finding is that some amount of improvisation and change from the regular norms could improve the productivity of the *jhum* fields. The results of the study confirm that even in *jhummimg*, i.e., subsistence farming, the production of output (paddy) corresponds to the factor inputs the farmers apply. Under normal conditions, out of the 12 variables, the three factor inputs: area, irrigation and supplement are significant. A unit increase in any one of them can bring about a remarkable improvement in the output level.

Meghalaya is prone to a number of biophysical, institutional and socio-economic constraints resulting in peculiar subsistence agriculture with low input, low yield, and low risk technology. And Nongtrai area is a classic example of backwardness and poverty due to the lack of investments, infrastructures, industrialisation, road connection, etc. This ushered in the existence of an economically weak society and the cycle of poverty continues to haunt the people. Institutional determinants play a major role in the allocation of homestead as well as the *jhum* fields to members of the *kurs* (clans). Though this is a matrilineal society and women play an active role to ensure food security and subsistence, their decision-making regarding *jhum* cultivation is weak. The influence of institutional determinants in the form of various practices attached to matrilineal system of the Khasis are so much ingrained and intermingled with traditional farming that it is difficult to separate them. Subsistence agriculture, thus, enables the community to retain their cultures, traditions and other age-old institutions. But subsistence farming and institutions, which forms the basis of the community's culture and tradition, is threatened with the introduction of technology in farming.

As the region is marked by various deficits arising out of historical reasons and institutional rigidities, a special effort is required to reverse the trend towards alienation and distancing of the people from the mainstream. To this end, innovative participative planning, sensitive implementation and novel delivery system are needed (Upadhyay & Pandey, 2009). Again, appropriate policies and programmes should be initiated by the Government to incentivise new employment opportunities and to make farming and other rural occupations intellectually stimulating and economically rewarding so that the educated youth may be attracted and retained in rural areas.

7.2. Recommendations

To develop agriculture and to improve on the productivity, the regular norm of any researcher is to recommend policy measures such as the adoption of multi-cropping system, modern technologies, trainings, HYVs, etc. But for subsistence farming in the Nongtrai area as well in the other parts of Meghalaya, special treatment is required. Subsistence farming or *jhumming*, as it is known here, is very much intertwined with tradition and custom that it cannot be done away with completely and replaced by other modern processes. Accessibility to the marginal farmlands in the hilly slopes is difficult. Thus, what is required is improvement on the existing system. Acculturation of the farmers of the Khasi Hills after 1948 to the new pattern of cropping rotation of the Angami region in Nagaland is indeed laudable. It has resulted in the excess production of potatoes after a few years. In the same manner, the Government could support the farmers by making small dams across the rainfed small streams and rivulets to harvest rainwater during rainy season so that it could be utilised as and when needed. Though no manuring is ever seen in the *jhum* lands, cow-dung manure could be encouraged to the farmers. Rearing of cattle and other livestock could be introduced in the farm yard, so that the activities will depend on each other to form an integrated development unit. All the suggestions mentioned requires support from the Government in the form of monetary incentives, subsidies and other awareness programmes. Thus, the study recommends that:

- A proper survey of the entire land and cadastral maps should be drawn so that the records of rights could be prepared. This will give a sense of security to the marginal farmers. Once they know they have a place in the cadastral maps, records of rights and books of registry offices, they will have the incentives to improve their lands. Again, the farmers having land in their own

names will be able to set aside their land as collateral to avail loans from banks in times of need.

- Appropriate policies and programmes should be taken up by the Government to incentivise the villagers on the value of education and other awareness such as family planning, women's welfare and other schemes for the overall development of the community.
- The State Agriculture Department needs to intensify rigorously the farmers training programmes. Provision of IT packages such as TVs, computers with Internet facilities at every settlement should be prescribed to sensitise awareness among the farmers of the latest developments in agricultural production and marketing.
- Finally, there are many programmes and schemes of the Central Government for the betterment of the rural women. A sincere endeavour from the State Government is required to see that it reaches the stakeholders.

7.3. Limitations

This study has tried to explain the nature of subsistence farming and its determinants, but our study is not free from limitations. Some of the limitations are mentioned below:

- The result of the study is constrained by the limitations of the econometric tools. All econometric tools have their limitations and they creep into the analysis.
- Another limitation of our study is that biological and prophylactic factors like heat, moisture, nutrients, light, water, etc., could not be included as

explanatory variables because of the problems of specification, quantification and measurement due to the non-availability of scientific instruments.

- The study could have been improved had it been a panel study. There is a scope that future researchers may collect information on the same variables, and from the same households as far as possible and compare the changes.