

Chapter 7

Conclusion

The main points of findings are illustrated in following paragraphs. The study analyses the food security status in Assam from both macro and micro perspectives in order to address the *Objective Number 1*. At the macro level food security status is analyzed with respect to agro-climatic zones based on aggregate secondary data collected from various sources. There are a number of indicators that influence the food security in one way or the other. We have combined these indicators into a set of four broad food security indices. These are food availability, food accessibility, food utilization and lastly the stability. The findings reflect that

1. No agro-climatic zone is able to attain high levels of food security in 2001.
2. Only the Central Brahmaputra valley is able to attain a moderately higher food security level compared to other zones in 2001.
3. But in 2011, two regions namely Lower Brahmaputra valley and Central Brahmaputra valley is able to attain a high food security level.
4. Comparison between food security index of 2001 and 2011 reveals that although the food security status in all agro-climatic zones has marginally improved over the years, but noticeable improvements has been made by Barak Valley and Lower Brahmaputra Valley.

Moreover, the analysis above does not talk about the food security status at the household level; hence the Food security status is analyzed with the help of primary data relating to different agro-climatic zones collected during 2014-15. The analysis of primary data yields a somewhat different result from that of secondary data. The findings highlight that

1. On aggregate the food security status at the household level is not satisfactory.
2. In lower Brahmaputra valley almost 60 percent of the household enjoy high levels of food security
3. While in North bank plain merely 38 percent and in Barak Valley almost 42 percent households enjoy high levels of food security.

An attempt has also been made to ascertain the structure of nonfarm employment opportunities in Assam to address the *Objective Number 2*. The non-farm sector is taken to comprise of all those economic activities which generate wage and self employment outside the agricultural sector for the rural population. Data from various secondary sources reveal that the non-farm sector constitutes an important segment of the rural economy in terms of providing employment to the rural workforce in Assam. The important findings regarding the WPR and pattern of non-farm employment includes:

1. WPR is comparatively low in Assam with significant gap between the WPR of males and females.
2. The incidence of rural non-farm employment in the state is higher than all India average.
3. The percentage share of rural non-farm employment in Assam is showing increasing trend overtime apart from a slowdown in 2004-05.

As the share of Nonfarm employment is increasing over the years so an analysis of the sectoral distribution of the workforce is made. The relative employment-absorbing capacity of different sectors and the changes within them during the post-reforms period in the rural labour market of Assam can be better understood by analysing the employment growth rates in different sectors. There has been structural transformation in the rural sector of Assam with an accelerated but fluctuating decline in the proportion of male workforce engaged in the farm sector in favour of the non-farm sector during 1993-94 to 2011-12. Major highlights are:

1. There has been a gradual increase in the proportion of male and female workers in the non-farm sector during 1993-94 to 2011-12.
2. In case of females, the proportion of workers engaged in the farm sector has remained high with a fluctuating trend.

Such an analysis also bears special importance from the perspective of policy formulation as it helps in identifying sectors, which require special attention to improve employment growth. The overall rate of growth of employment for rural

males and females has shown a fluctuating trend during 1993-94 to 2009-10. This sudden increase or decrease in the growth rate for females is mainly due to their large involvement in the farm sector, which witnessed a similar type of abrupt increase and decrease of employment growth rate. The employment situation of females worsened due to their social exclusion and exploitation on account of their lack of access to education, information and mobility (Unni, 1989).

An intense analysis of rural non-farm sector based on population censuses is made. Focusing on the trends of expansion of rural non-farm workers, the percentage of rural main workers engaged in the non-farm sector had increased from less than 16 percent in 1971 to over 32 percent in 2011. As the percentage of rural main workers engaged in the non-farm sector had increased overtime so an analysis of the comparative growth rates of employment in different sectors of the rural non-farm economy in the pre and post reform periods in the state will be a worthy exercise for understanding the nature of rural non-farm sector. The findings highlighted that

1. The expansion of rural non-farm workers in the state has been comparatively higher in the post reform period.
2. With the exception of mining and quarrying, employment in all other subsectors has been higher in the post 1991 period.
3. The construction sector in particular has been at the forefront of employment generation in the rural non farm sector with employment growth of over 15 percent per annum during the post reform period.

This growing importance of rural non-farm sector in the rural economy can be understood from the expansion of rural non-agricultural/non-farm enterprise in Assam. The number of rural non-agricultural enterprises in Assam has shown an increasing trend reflecting a growth rate of more than 7 percent per annum during this period. Further, a major share of all non-agricultural enterprises in the state are located in rural areas. For assessing the significance of rural non-farm sector in the economy of Assam an analysis of the composition of rural enterprises in Assam is made. Analysis reveals that

1. The rural non-agricultural enterprises in Assam have shown an increasing trend.

2. Major share of all non-agricultural enterprises in the state are located in rural areas.
3. 94 percent of all rural enterprises were non-agricultural enterprises in 2005.
4. More than half of these enterprises were involved in retail trade while 13 percent were manufacturing units. With a little over 4 percent of the rural non-farm enterprises in the state comprised of hotels and restaurants in 2005.

While examining the reasons behind establishment of non-farm enterprises: the lacking opportunities of employment in rural areas, the availability of local raw material and the skills among the family members for performing various work related to concern activity are noted to be the major factors, which initiated the households to opt for establishing non-farm activities at the present location. Moreover, the intent on the part of Government in promoting non-farm activities can be seen in terms of providing financial and technical assistance to households for the establishment of non-farm activities.

The traditional households based low paid non-farm activities such as manufacturing and professional services are the origin of past several generations while the most modern form of relatively better earning non-farm activities such as trading and commercial and transportation are of the recent origin.

Also based on primary survey the Structure of employment of the workforce is analysed using standard occupational and industrial classifications. Results show that non farm sector is increasing in employment across all agro-climatic zones. The major findings in this regard are elaborated below:

Firstly, the employment share across social class shows that Scheduled tribe have relatively low share in agriculture and allied activities while OBC have high share. Scheduled tribe have highest share in non-agriculture employment followed by Scheduled castes. The reason for highest share of non-agriculture employment among STs is primarily due to their engagement in traditional occupation like weaving, manufacturing of woolen garments and trading. Employment in manufacturing is significantly higher among STs and SCs while employment share in construction is highest among OBCs followed by SCs. GENs are observed to have highest literacy

both among males and females in the present survey and also have traditionally been most forward class both in terms of education and employment in the region which induces them to attain highest share in public public administration, education etc and other professional scientific and technical activities. Next we analyze the Occupation and industrial distribution of workforce.

Secondly, the occupational distribution of workers by industry shows a very narrow base with little diversification across industry groups. Majority of workers such as the elementary occupation holders (cultivators, animal husbandry workers etc.), skilled agricultural and fishery workers, professionals, Plant, machine operators and assemblers are concentrated in a single industry, the remaining occupational groups such as Legislators, senior officials and managers, Technicians and associate professionals, clerks, Service, shop and market sales workers, Craft and related trades workers are bunched in to a few industry groups.

Thirdly, the categorization of workers by employment status show that the self employment is the principal mode of livelihood of the workforce because of lack of regular employment opportunities, followed by casual workers. The share of regular employed is too small.

Fourthly, the scrutinization of the information on principal workers pursuing subsidiary occupation yields that landless workers seem to be depending primarily on the single activity (62 per cent), while in the case of marginal and small landholding classes, dependence on multiple activities increases in order to augment their household income. However, in case of medium and large landholding class such dependence on multiple activities declines, probably because household have relatively higher incomes from agriculture and animal husbandry and other assured sources of incomes such as from pension and other incomes. The information on Principal workers pursuing subsidiary occupation highlight that among the elementary occupation holders majority are service, shop and market sales workers, and also craft and related trades workers. When it comes to skilled agricultural and fishery workers majority are service, shop and market sales workers. Moreover as expected legislators, senior officials and managers, professionals, technicians and associate

professionals have no secondary occupation as the earning levels are high. Among the Service, shop and market sales workers and Craft and related trades workers and plant, machine operators and assemblers majority are engaged in elementary occupations and also as skilled agricultural and fishery workers.

In order to address the *Objective Number 3* and to test the *Hypothesis Number 2* an enquiry of the relationship between household food security status and significance of non-farm sector is essential. So, for ascertaining the relationship between household food security status and non-farm employment of rural households in Assam primarily a bi-variate correlation coefficient is obtained. For this purpose we have taken variables like percentage of food secure households in a district to define household food security status of rural households and the percentage of rural non farm workers in a district as proxy variable for assessing the significance of non farm sector. In the district level correlation matrix, the percentage of food secure rural households in Assam is positively and significantly correlated with the percentage of rural workers engaged in the non farm sector.

However, the analysis based on secondary data although confirms about the relationship between the food security status and non-farm sector but for understanding the direction and magnitude of the relationship i.e. to identify the impacts of non-farm sector on the status of food security at the household level in rural areas of the state we fit an logistic model taking food security status of rural households as the dependent variable and significance of non-farm sector as one of the independent variable. An insight into results provided by the Binary Logistic Model is illustrated below.

The probability of a household being food secure increases as the households' dependency on the non-farm activities, when taken up as a primary occupation, increases at 1 percent level of significance. This suggests that the non farm sector exert positive and significant effect on the household food security status of the household. Asset possessed by the households raises the probability of a household being food secure at 1 percent level of significance. The result indicates that higher the value of assets, higher will be the food security status. Level of education attained

by the head of the household raises the probability of a household being food secure at 5 percent level of significance. The religion of the household in cases when it belongs to Hindus raises the probability of a household being food secure at 5 percent level of significance. The accessibility to credit decreases the probability of a household being food secure at 5 percent level of significance. Social group when the household belongs to forward castes seems to exert positive impact on the probability of a household being food secure. Sex of the head in female headed households seems to decrease the probability of a household being food secure. The possession of the livestock seems to exert a positive impact on the food security status. Government programmes' seems to have negative impact on the food security status of the households. Similarly the size of Land owned significantly increases the probability of a household being food secure. Lastly, the constant term exert negative pressure on the food security status. The constant term captures the effect of structural factors effect which is not included in the model. Various measures of goodness of fit reflect that model is a good fit.