

Chapter 1

Introduction

Principal purpose of our thesis is to investigate the fact that whether the prevailing food security situation of the masses in Assam can be improved to next level through participation in non-farm sector based on both secondary and primary data. As the secondary data does not yield any component for micro level analysis, so we have resorted to primary data collected during 2014-15.

Regression analysis is performed on the primary data for defining the relationship between food security and non farm sector. In this study food security status of the masses is analyzed based on secondary data across agro-climatic zones. In addition, household based food security index is prepared with the help of data collected through field survey, comprising of all four dimensions- food availability, accessibility, utilization and stability. In this empirical study, an analysis of various dynamics of nonfarm sector is also made based on secondary and primary data.

To put the matter in perspective, ‘We are what we eat’ is an old proverb. Our nutritional status, health, physical and mental faculties depend on the food we eat. Thus, access to good quality food has been man’s main endeavor from the earliest days of human existence. It is the importance of food for human existence complemented by acute food crises and major famines in the world which brings the concept of food security in the limelight for the first time at the World Food Conference in 1974 with initial focus on the volume and stability of food supplies.

The idea of food security attained wider attention since the 1980s after the debate on ‘access’ to food and the focus of the unit shifted from global and national levels to household and individual levels and hence the concept of food security is further elaborated in terms of access of all people at all times to enough food for an active, healthy life. But with the continuing concern of protein energy malnutrition the definition was further broadened to incorporate food safety and also nutritional balance, reflecting concerns about food composition and minor nutrient requirements for an active and healthy life.

In 1986, the highly influential World Bank report “Poverty and Hunger” focused on the temporal dynamics of food insecurity. It introduced the widely accepted distinction between chronic food insecurity, associated with problems of continuing

or structural poverty and low incomes, and transitory food insecurity, which involved periods of intensified pressure caused by natural disasters, economic collapse or conflict (MSSRF, 2003) which raises concerns about the household food accessibility situations at all times. The potentially high degree of context specificity implies that the concept had both lost its simplicity and was not itself a goal, but an intermediating set of actions that contribute to an active and healthy life. Thus, food security is said to exist in a situation of

“all people, at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs food preferences for an active and healthy life” (FAO., 1996, p.7)

This definition points to the multi-dimensional nature of food security concept which encompasses food availability, access, utilization and stability. While food availability is a function of production, access to food is a function of purchasing power or earnings. Utilization of food is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, and diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consume, this determines the nutritional status of individuals.

The stability of the other three dimensions over time highlights the fact that a population, household or individual must have access to adequate food at all times as if ones food intake is adequate today, he is still considered to be food insecure if he has inadequate access to food on a periodic basis, risking a deterioration of his nutritional status. Thus from the above discussion, we can safely compress the concept of food security into two major dimensions- physical and economic dimensions: the former referring to physical availability of food grains in sufficient quantities required for an active and healthy life and the latter to economic access to food.

Amartya Sen’s influential work on ‘Poverty and Famine’ (1981) has played a decisive role in shifting the focus of food security analysis from supply side to the demand side

as the availability of food grain in sufficient quantities is necessary but not sufficient condition for providing the food security to the masses. A large segment of population could be living in hunger even if the nation had adequate 'cushion' to maintain aggregate food availability.

In this regard, the Entitlement Approach (1981) has emphasized on the importance of escalating the accessibility to food, rather than the availability of food (Devereux and Maxwell, 2003) through increasing the purchasing power of the household. Thus, for ensuring food security at household level, along with availability of food grains in sufficient quantities, adequate purchasing power in the hands of people is also essential. In such a situation, the rural non-farm sector has dire implications in boosting the purchasing power of the rural households especially in a situation where the door of agricultural sector is almost closed in respect of providing gainful employment opportunities to the rural masses.

In Assam, achieving food security, i.e. the secured accesses to sufficient and affordable nutritious food, in its totality continues to pose a challenge in terms of its severity and proportion of population affected, especially in rural areas. Assam has achieved a moderate success in terms of the availability of food grain in sufficient quantities either by own production or inflow of food into the area.

But, food availability by itself does not ensure adequate access to food, though adequate food availability is necessary for food access: But it has failed in terms of providing economic access to food. One of the factors which influences the economic access to food is income of the people which is directly related to livelihood choices. If people have access to livelihood, they would in general have access to food and nutrition. Those who are unemployed, employed on a casual basis or under-employed would have limited economic access to food. As farm sector in Assam cannot provide gainful employment opportunities, in such situations nonfarm sector has great significance.

1.1 Statement of the Problem

In Assam, achieving food security continues to pose a challenge. Although it has achieved some success in terms of physical access to food, but providing economic access to food is still a far goal. More precisely, nearly 75 percent of the rural households reported that they had limited access to sufficient food throughout the year (State Level Report, B.P.L. Census 2002, p.3).

One of the main reasons for the lack of access to food in the state is low level of income. At the time of independence, Assam's per capita income was only marginally less than that of the average figure of the country but in 1988, the average per capital income of the country was 1.8 times higher than that of Assam. (The Assam Human Development Report, 2003, p.25). Low level of per capita income also leads to the low level of consumption expenditure which is extremely low at rupees 169.93 in urban areas and rupees 153.60 in rural areas of the state (Assam Human Development Report, 2003, p. 25). This signifies a low level of income and hence purchasing power in the state.

On the other hand, the rural non farm sector in the state has started to constitute an important segment of rural economy as an employment provider to the rural workforce as the non-farm sector is providing gainful employment opportunities to the rural masses. This has been happening in a situation when the door of agricultural sector for providing gainful employment opportunities to the rural masses in the state is almost closed. Under such circumstances, the income attained by the people from non-farm employment opportunities may be helpful in enhancing their accessibility status of food to a large extent.

1.2 Objectives of the Study

Keeping in view the importance of examining the impacts of non-farm sector on food security in a state which is characterized by exceedingly depressing food security conditions with a slowly increasing non-farm employment trends, the present study frames the following objectives. The specific objectives of the study are:

1. To estimate the level of the food security attained by rural households across agro-climatic zones of Assam.
2. To ascertain the structure of non-farm employment opportunities in Assam.
3. To ascertain the impact of village non-farm sector on the status of household food security in the study area.

1.3 Hypotheses of the Study

In order to address the objectives of the study, the present study attempts to test the following hypotheses:

1. Null hypothesis: The food security status of households in the state of Assam is not satisfactory.
2. Positive Hypothesis: The opportunities of non-farm employment exert positive impact on the status of rural household's food security level in Assam.

1.4 Methods of the Study

In this study, the notion of food security and the meaning of nonfarm sector have been framed in the following way:

1.4.1 Conceptual Framework

Food Security

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life, as emphasized by Food and Agriculture Organisation. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern.

Non-farm Sector

For defining the non farm sector we adopt the definition given by The Study Group on rural non farm sector in Assam (Bhimjani, 1994) with slight modification as follows:

“The rural non farm sector comprises all non-agricultural activities: mining and quarrying household and non-household manufacturing, processing, repairs, construction, trade, transport and other services in villages and rural and rural towns of up to 50,000 population undertaken by enterprises varying in size from household ‘own-account enterprises’ all the way to factories”.

For the purpose of the present study the above definition is accepted with minor adaptation pertaining to population size. Thus, all villages and rural towns with population up to 5000 are categorized as rural areas in order to ensure conformity with the definition of rural areas and classification of the rural workforce as given in India’s Population Census.

1.4.2 Geographical Area

The study Area is the state of Assam. It is located in the heart of the northeastern zone of India. The state has 27 districts, and its capital is Guwahati. It covers an area of 78,434 square kilometer approximately which account for about 2.39 percent of the total land area of the country giving shelter to 2.58 percent of the total population of the country. This state is predominantly rural with approximately 86 percent of the total population of 4,388,756 living in rural areas (Population Census, 2011).

1.4.3 Data Collection

The present study is based on both primary and secondary data. Secondary data is collected from different publications of Directorate of Economics and Statistics, Government of Assam; District Rural Development Agency, Government of Assam; National Sample Survey Organization, Ministry of Statistics and

Programme implementation, Government of India; Central Statistical Organization, Ministry of Statistics and Programme implementation, Government of India; and various volumes of population census is utilised.

Primary Data is also collected from the randomly selected households with the help of structured schedule through personal interview method. Multistage random sampling technique is used for sampling selection. Considering the diverse physiography of the state of Assam it can be broadly classified into six distinct agro climatic zones.

In the first stage of selection, one most developed district is selected from each of the agro-climatic zones. In the second stage, one most developed block is selected from each of the selected six districts. In the third stage, one most developed village is selected from each of the selected blocks. In the final stage, ten percent of the total households in the village are randomly selected with the help of random number tables with primary unit of sample being the rural households of Assam.

These data is used to assess the food security status of rural households of Assam and also to ascertain the structure of non-farm sector in Assam. Besides this, the data collected is also used to evaluate the possible effects of non-farm sector on food security at the household level.

1.5 Significance of the Study

The heavy dependence of population on agriculture has continued in spite of the slowing down of agricultural growth. But, the growth rate of the agricultural sector has been a little over one percent during the period from 1994-2004 (Roy and Dey, 2010). With such a sluggish growth rate, the agricultural sector is unlikely to provide gainful employment opportunities to the labour force. This signifies a lower earning opportunity of the people coupled with low level of purchasing power in the state as consumption expenditure is extremely low in both urban and rural areas of the state (Assam Human Development Report, 2003, p. 25). These facts highlights a worse food accessibility situation as nearly 75 percent of the rural households reported that they had limited access to sufficient food throughout the year (State Level Report, B.P.L. Census 2002, p.3).

In this context, the Rural Non-Farm Sector has received considerable attention from both policymakers and researchers in propounding and implementing rural development strategies (Lanjouw and Shariff, 2004) in the face of heavy demographic pressure on land, small and fragmented land-holdings and iniquitous land-distribution structure.

The other important factors in favour of the rural non farm sector are: its employment-absorption capacity, growing potentiality, arresting rural-urban migration, and reducing inequality and poverty (Islam, 1997). Moreover, the productivity and profitability in the non-farm sector is generally higher in farm sector and so people in rural areas now-a-days are accepting it as substitutes of farm activities. This indirectly helps in accelerating the growth of rural areas by increasing the income of the rural people as non-farm wage is usually higher than agricultural wage, provides security and reduces risk and uncertainty associated with farm income and hence improves the food security situation.

In this regard, the role of non-farm sector has become more important because it is generally organized on a small scale and it provides employment opportunities, mostly using local labour and local resources as well as labour-intensive techniques. So in this thesis we have enquired about the fact that whether the food security situation of the masses can be improved to next level through participation to non farm sector firstly based on secondary data. The secondary data does not yield any component for micro level analysis. For this purpose we have resorted to primary data collected during 2014-15. Regression analysis is performed on the primary data collected for defining the relationship between food security and non farm sector.

In addition to analyzing the relationship between food security and nonfarm sector, the level of food security across agro climatic zones in Assam is analyzed based on both secondary and primary data encompassing all four dimensions of food security. Further, as the dynamics of the rural non farm sector varies across time and space, in this thesis an analysis of various dynamics of nonfarm sector is made based on secondary data and also to cover various dynamics which are not covered by the secondary data we have resorted to primary data.

1.6 Scope of the Study

In this study food security status of the masses is analyzed based on secondary data across six agro-climatic zones namely Lower Brahmaputra Valley, North Bank plain, Central Brahmaputra Valley, Upper Brahmaputra Valley, Hill Region and Barak Valley in Assam. In addition, household based food security index is prepared across the six agro climatic zones as well as for whole Assam, with the help of data collected through field survey, comprising of all four dimensions- food availability, accessibility, utilization and stability.

As the dynamics of the non farm sector varies across time and space, the present study tries to unveil the pattern of non-farm employment and structure of non-farm workers in Assam during the period 1993-94 to 2011-12. Further an analysis of non-farm enterprises is made based on Economic Census data. Moreover, a field survey is undertaken to realize various micro concepts related to non farm sector on structure of employment, composition of non-farm workers and also to reveal the composition of non-farm enterprises with a special focus on entrepreneurship which are often not reflected in big national level survey.

As in Assam food security is primarily a problem of providing economic access to food and non-farm sector has a great significance in this regard so the present study also tries to enquire about the fact that whether the food security situation of the masses can be improved to next level through participation to non farm sector based on both secondary and primary data.

1.7 Limitations of the Study

(a) A major limitation of the study is that due to lack of physical records, data is collected on households' food production, food purchases and food consumption based on largely memory recalls which may be subject to bias on the part of respondents.

(b) This study did not consider the effects of the anti-nutrition factors that may be present in some of the food items which may prevent the nutrients from being available for body metabolism.

(c) The study has a limitation in terms of selecting a small, although representative, sample from the population under study because of time and budget constraint.

(d) To select a small, although representative, sample from the population under study because of various constraints we have divided Assam based on the conventional classification based on agro-climatic zone while other probable division pattern could not be applied.

(e) In the present study it is assumed that farm sector provides us with a production base.

1.8 Chapter Scheme

This thesis comprises of seven chapters. The detailed chapter scheme is illustrated below.

Chapter-1: Introduction

We begin our thesis with an introductory chapter. This chapter starts with a brief discussion on the importance of food in human life, the concept of food security and its different dimensions-physical and economic would be also illustrate. Then the impact of non-farm sector especially on economic dimensions of food security through and increased level of purchasing power is explained with special reference to Assam. This will be followed by the sections on statement of the problem, a brief conceptual framework. The main objective and hypotheses are elaborated with a brief methodology followed by sections on the significance of the present study and the limitations of the study. Lastly, the chapter scheme of the thesis is illustrated.

Chapter-2: Review of Literature

A review of existing literature on the possible impacts of non-farm sector on the food security status of rural households are carried out in chapter two named as 'Review of Literature'. This chapter is further subdivided into some subsections. The first subsection reviews the conceptual and theoretical literature on food security and non-farm sector. The next section reviews the empirical studies concerning India on food security and non-farm sector. The subsequent section looks at the empirical studies concerning only the North-east India on food security and non-farm sector. Lastly, we tried to compress the scope of both theoretical and empirical literature demonstrated in these three sections and try to sense the research gaps to put it summary section.

Chapter-3: Methodology

The methodological issues of the present study are dealt in the 'Methodology' chapter. The methodology chapter begins with the conceptual framework and conceptual design of the study. Then a brief description of the study area is provided. The data sources for the present study are also elaborated. The various secondary data sources are compiled together.

The sampling technique used for collecting primary data is also being discussed. The different stages involved in the process of compressing the geographical area i.e. the stages involved in reaching the primary unit of sampling are being discussed elaborately. Various analytical techniques adopted for analyzing both primary and secondary data especially for unveiling the possible effects of non-farm sector on food security at the household level is also elaborated in this chapter.

Chapter-4: Food Security in Assam

'Food security in Assam' is the title of the chapter four which evaluates the status of food security in Assam. The state of food security is analyzed at both macro and micro level. Macro level analysis is carried out on the basis of data available from sources like Directorate of Economics and Statistics, Government of Assam, NSSO and B.P.L. Census, 2002. As the concept of food security is multidimensional in nature encompassing the dimensions of food availability, food access, utilization and

stability so an attempt is made to access the situation in these respects. An in-depth analysis of the food security status at micro level is also undertaken using the data collected from the field survey.

Chapter-5: Non-farm Sector in Assam

Although agriculture still comprises an important wing of the economy of Assam, but growing size and pattern of rural non-farm sector is captured in the chapter. This is analysed in respect of three disjoint but related dimensions the share of rural nonfarm employment, the structure and composition of rural nonfarm workers in the state and lastly, the structure and composition of rural nonfarm enterprises in the state. These dimensions are analyzed with the help of published secondary data explored from the sources like NSSO, Economic Censuses. While a detailed structure of employment by industry groups across agro-climatic zones, occupation and industrial distribution of workers, employment status of workers are analyzed using the primary data collected from the field survey.

Chapter-6: Non-farm Sector and Food Security in Assam

This chapter is mainly concentrated on unveiling the possible effects of non-farm sector on food security. The effect of non-farm sector on the state of food security is analysed at both macro and micro level. Macro level analysis would be carried out on the basis of data available from sources B.P.L. Census, 2002 and Population Census. An in-depth analysis at micro level is undertaken using the data collected from the field survey with rural households being the prime focus. A Logistic regression analysis is performed for the purpose.

Chapter-7: Conclusion

The conclusion chapter deals with the main findings of the study. This chapter elaborates the main findings based on the analysis of secondary and primary data and enlists the policy implication thereof.