



INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI  
SHORT ABSTRACT OF THESIS

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Thesis Title: **Analysis of Food Demand in Assam: Evidence and Application from Primary and Secondary Data**

SHORT ABSTRACT

The thesis addresses the issues related to food demand estimation for the Indian state of Assam through exploiting both official (NSSO) as well as survey data. Motivation for taking up this research is twofold. First, although there are many types of research related to pan India level concerning computations of various demand elasticities, studies that are based on a single region or a state are somewhat rarer. Such pan-Indian studies do not do justice to the diversities that are natural to a country like India. Thus, there is a motivation for such studies from a positive frame of analysis. Second, such elasticity measures directly contribute to understanding and implementation of various policies, e.g., tax policy in particular and food policy in general. It is our contention that in a country like India, a “one size-fits-all” type of policy may miss its welfare targets altogether. And hence, in order to implement a differential regional policy (or policies), we need to understand regional demand patterns. Hence the research objective also has a normative dimension.

A brief outline of the thesis has been provided here. First, a broad range of literature is reviewed to understand the issues involved both at the national and international levels. This non-technical survey allows us to identify the gaps in the present state of knowledge and provides the motivation for the current endeavour. Second, we reviewed the technical methodology of demand estimation and its applications, particularly to tax subsidy issues. These two chapters complement each other. Given this background, Chapter 4 explores the pattern of food consumption in Assam, using secondary data sources (NSSO 68th and 66th rounds). Also, the methodology of these rounds and highlight their similarities and differences has been analyzed. Then, using the data, we undertake a comparative study of elasticities across rural and urban sub-samples (within a single round) as well as over the different rounds (over time comparison). Both the Linear Expenditure System (LES) and LA/AIDS estimation methods to figure out the elasticities has been used. Using the estimates, it is shown how the data can be used to predict the direction of optimal commodity tax reform. Given the obsolescence of the data (NSSO 68<sup>th</sup> round was carried out in 2012, and since then there are no other rounds of NSSO detailing consumption expenditure), a survey data was carried out in two contiguous districts of Assam: namely Kamrup Metropolitan (That is, Guwahati city, the state capital) and Kamrup. The sample survey covers both rural and urban parts. The next two chapters are devoted to the analysis of the survey. Chapter 5 presents the details of the primary data. After providing the details of survey methodology, the rest of the chapter is then devoted to exploratory analysis of household-level consumption expenditures (at various levels) and their link with demographic characteristics. Paired t-tests and ANOVA analysis have been used

extensively to highlight differences in the consumption analysis. Of course, such group comparisons have problems of their own.

Hence, in the next chapter, the data for regression analysis and applications has been used. The main aim is to analyse food consumption patterns. In that chapter, two different techniques to analyse demand was used. First, a multiple equation demand system estimation (using LES and LA/AIDS) was used where the data permitted. Second, the chapter also discusses a single equation model (with limited data) and highlights the difference between urban/rural as well as poor/rich sub-samples in terms of the effect of demographic variables and expenditure elasticities. The estimates from the complete demand system are used in optimal commodity taxation literature as well.

Based on the findings, one of the major implications is that policymakers should consider context-specific identification of factors affecting food consumption demand. Estimates do differ across samples as well as across the method of estimation. Policy-wise, one must pay attention to the demographic variables. Our analysis provides some limited evidence that the tax rules as prescribed by the current GST regime should be modified.

