Chapter 1

Introduction

1.1. The complex multi-dimensional problem of poverty with its origins in both national and international domains still gains a pivotal position in the agenda for effective and extensive discourse among elite academicians, (to revive the process of theorization) active researchers (to renovate and upgrade the analytical pursuits) and ambitious policy-makers (to create a supportive environment for its speedy alleviation). The necessity to design a broader strategy to tackle the problem of poverty, (by incorporating (i) conservation of resources, (ii) promotion of economic growth and (iii) implementation of country-specific anti-poverty programmes as its base) gained adequate stress and recognition at the global level. The resonance of such an emphatic plea\(^1\) to combat poverty with all possible means still radiates vibrancy and transmits spirit of dynamism to all concerted action against this major challenge. A decade after Rio Conference (92), international community\(^2\), at large, slightly perturbed by the slow pace of progress attained by many countries in leveling down the prevalence ratio of poverty, collectively and strongly subscribed to the general consensus that 'increased targeted funding' is highly indispensable and absolutely essential to fight poverty vigorously on a massive scale. Among alternative means (adopted by many countries to reduce substantially the prevalence of hunger) the twin track strategy of comprehensive

\(^1\) Agenda 21-3, Combating Poverty, Rio Conference, 92.

\(^2\) In a joint report, the United Nations (U.N.), Food and Agricultural Organization (FAO), the International Fund for Agricultural Development (IFAD) and World Food programme (WFP) said, “without increased targeted funding to fight world poverty and hunger, the most basic obstacles to human and economic potential will remain” (Business line, Vol.9, No. 78, March 2002).
rural development and increased investment in agriculture\textsuperscript{1} received wide acceptance at
the international level\textsuperscript{2}. In a way, it becomes all the more visible that the vision of policy-
makers to a large extent is sharpened by the process of profound theorization and
elegant analytical endeavor.

Hence it becomes all the more visible that if viewed pragmatically, poverty identified as a global phenomenon, requires multi thronged and concerted action for its absolute elimination. Moreover, intricacies involved in the theoretical elucidation of the concept of poverty, should fully be unearthed, before suggesting an effective and practical mode of operation to cure it. Though the distance between abstract theorization and lucid concretization cannot be narrowed down, broader canvas encompassing 'entitlement approach'\textsuperscript{3}, provides a solid framework for analytically approaching the problem of poverty.

The problem of poverty, being an outward manifestation of structural\textsuperscript{4} and systemic deformity, gets aggravated in unparalleled magnitudes and assumes new proportion and dimensions in a broader context of absolute exclusion of people from land and labor market. Hence an alternative view of wider popularity subscribing to the

\begin{itemize}
\item \textsuperscript{1} Recent report (U.N, 2002) has identified increased investment in agriculture as the sole factor which paved the way for realizing substantial reduction in the prevalence of hunger by many nations between 1975 and 1999. (Business Line, vol.9, No. 78, 2002).
\item \textsuperscript{2} International Conference on Financing for Development (2002)
\item \textsuperscript{3} Sen, A.K. (81).
\item \textsuperscript{4} An inddepth and comprehensive analytical approach towards establishing a favourable and confirmatory view on this argument has been accepted by Keith Griffin (81)
\end{itemize}
belief that intensity of poverty can be diluted through the transfer of land\(^1\) (the landless being the beneficiaries) and generation of employment opportunities\(^2\) is received with a spirit of optimism. But the contentious proposition that the task of poverty eradication can be successfully completed by relying on land (as a mere asset\(^3\)) distribution

\(^1\) Basic tenet presumed to have formed the solid base of land reforms implemented in Kerala and elsewhere. Importance of land reform as a redistributive policy, is highlighted (Basely and Burgess, 2000) by precisely calculating its positive impact on reduction in poverty gap by 1 per cent (which is equal to one-tenth of actual reduction in poverty over the period 1958-92') or a 10 percent increase in per capita income in India. Again the indirect effect of land reform on the landless is measured in terms of a rise in agricultural wages. Ravallion and Sen (94) favour the view that redistribution from land-rich to land-poor will reduce aggregate poverty in rural Bangladesh even without productivity effects.

\(^2\) Generation of adequate employment in the economy and ensuring a basic standard of living to the poor have been among the principal objectives of planning in India. Govt. of India introduced \textbf{Self-employment programmes}. [Small Farmers Development Agency, (SFDA). Marginal Farmers and Agricultural Labourers Development Agency (MPALDA), initiated during the 4th Plan period], \textbf{Wage employment programmes}, (Rural manpower programme in operation between 1960-61 to 68-69, the Crash Scheme for Rural Employment, CSRE, launched for a period of 3 years from 1971-72, Pilot Intensive Rural Employment Project, PIREP, operated for a period of three years ending in 1975, Food for Works Programme started in 1977, National Rural Employment programme, NREP and Rural Landless Employment Guarantee Programme, RLEGP, introduced in the 6th Plan) and \textbf{Employment Guarantee Scheme}, as anti-poverty target group oriented programmes.

\(^3\) Land as a productive and hence an income generating asset receives due recognition in this context.
mechanism has frequently secured a position of prime importance in the agenda for effective discourse and further dissective study. Previous analytical exercises drilled towards measuring the efficiency and adequacy of the instrument of land transfer as a genuinely designed weapon to fight poverty leaves lacunae of serious gravity. Slight deviation from the orthodox mode of interpretation of land-poor nexus transparentizes the route to a more realistic analysis. Any effort to provide a more meaningful interpretation to land-poor nexus requires an appropriate theoretical format constituting broader analytical framework. Elegant theorization projecting the well-knit inverse size-productivity link forms an ideal base for the conduct of further analytical endeavor.

1 An elaborate discussion on the inferences from earlier studies is conducted in Chapter II

2 Absolute absence of productivity effects as a variable strengthening land-poor nexus steals away the merit of earlier studies. Failure to incorporate land as a physical asset capable of generating income to its holder (to be viewed as a serious deficiency of such studies) has necessitated more realistic analytical pursuits. Visaria's (81) finding that “differences in per capita land can explain only a very small proportion of the variance in the monthly per capita expenditure (MPCE) of households” (P.2) does not actually accommodate the productivity effects. But Ravallion and Sen (94) while arguing that ‘lack of land and poverty are not perfectly correlated’ (P.1) search for the “rich” among the landless and the poor amongst those with ample land.

3 A.K. Sen (64). Pointing to the evidence of higher productivity on small farms, it is argued that land transfer (from land-rich to the land-poor) can yield pro-poor productivity effects (Domer, 72). Evidence collected from a number of countries support the view that output per acre decreases with the size of farm. Evidence for Bangladesh can be found in Hossain (77). A qualified, but broadly supportive evidence for India is found in Krishna Bharadwaj (74).
In this context, conceptualization of farm poverty, the core of the present study, gathers more analytical significance. The phenomenon of farm poverty, apparently a simple term, seeks interpretation in terms of a given size of operational holding adequate enough to generate net farm income (gross farm income minus cost of cultivation) which ensures minimum standard of living to a family of standard size. Conventional norms of analysis of poverty based on a poverty line (defined in terms of cut-off expenditure) are slightly disturbed to design an alternative analytical procedure to estimate the prevalence of farm poverty. Computational procedure used to estimate the magnitude of farm poverty is rather simplified by converting its base to poverty line income measured in physical units (say, acre) of operational holdings. Hence the analytical study on farm poverty is a specific and alternative attempt at approaching the problem of poverty from an entirely different angle. Moreover, such a discourse on poverty indirectly helps in designing the minimum size of operational holding necessary to guarantee poverty line income to the farmers. To be more precise, concrete elucidation of the concept of farm poverty seeks a more realistic interpretation of its association with resource (land) utilization rather than its allocation.

1 Usually the cut-off expenditure defining the poverty line is estimated by considering a family of five members.

2 Since land, being a productive asset, constitutes the base of the present study, both ownership operational holdings and leased in land are considered.

3 Possibility of an allegation that the mechanism of land distribution designed by Kerala Land Reform Act (1969) served the purpose of building an asset base rather than securing a regular source of (farm) income for the beneficiaries cannot be totally ruled out. An alternative analytical approach focusing more on measuring the extent of poverty reduction caused by intensive utilization of land would provide adequate proof to substantiate the above argument. But such as analysis does not fall within the scope of the present study.
1.2 Background of the study

The proposition that absence of an absolutely essential and favorable environment \(^1\) to fully exploit the available land to generate a steady and sustainable farm income forms a suitable conceptual background to proceed further with the present study.

Secondly, Kerala’s unique position which can be equated to an unprecedented increase in the number of small and marginal holdings assumes contextual relevance and forms a conjectural proposition to be tested empirically to examine whether the present study on farm poverty fits into a framework upholding an inverse size productivity nexus. Hence the direction of the present study, to a certain extent, is indirectly controlled by the practical dimensions of such a theoretical formulation\(^2\).

Thirdly, the fact that the agrarian scenario of Kerala, though under the grip of stagnation\(^3\), has secured remarkably higher standards in terms of productivity (Kerala

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\(^1\) All major constraints which stand in the way of maximum exploitation of land are given due consideration in this context.

\(^2\) The significance of such a theorization should not remain unexamined in Kerala since the magnitude of its practical validity assumes new proportions when the strength of marginal and small holdings in terms of number and area is paid proper attention. Recent Survey (95-96) informs that about 73.70 per cent of operational area comes under 98.93 per cent of our marginal and small farms.

\(^3\) Reference is made of the inferences from extensive analytical studies on the performance of the agrarian sector of Kerala conducted by Kannan et.al. (88,90). It is argued that Kerala has lost two decades of growth in agriculture (p.48). Recent data indicate that Kerala’s agrarian sector, under the liberalized trade regime is at present passing through a grim phase of change (for the worst). The fall in the prices of plantation crops such as rubber, tea, coffee, cardamom and also coconut has substantially subdued the agrarian economy of the state.
leads other states in the country in respect of gross farm income per hectare of cultivated land. (Economic Review, 2000) has led to the formation of an impressionistic idea regarding the estimation of a minimum size of holding (break-even holding size, hereafter) adequate enough to generate the poverty line income for a family of five members\(^1\).

Fourthly, analytical procedure\(^2\) adopted to define poverty line in terms of physical units of ownership holding does not fully reflect the importance of land as an income earning asset. More significantly land is assigned only a passive role to play in the overall poverty alleviation mechanism.

Fifthly, lack of any concrete effort in the direction of designing a suitable poverty line holding size for Kerala leaves behind a visible vacuum and hence adds strength to the conduct of a study of such a dimension in Kerala. Moreover, the fact that inter-regional variations in cropping pattern (solely a discretionary exercise of cultivators governed partially by the farm price structure and geographical specificities providing locational advantages) too acted as a critical force behind the extension of this study to capture regional dimensions of farm poverty. The above mentioned factors individually and collectively influenced and indirectly paved the way for the conduct of an independent analytical study on farm poverty in Kerala both at the state level and regional level.

\(^1\) Latest (99-2000) state-specific cut-off expenditure defining poverty-line (rural) for a family of five members per annum is used for further analysis.

\(^2\) But Sanyal, by using an indirect method of linking poverty line (nutritional specificities equated to monthly per capita consumption expenditure (MPCE) to the ownership holding size, has computed 2.50 acres as the poverty line size of holding for Kerala. Basing the study on the data from NSS, trends in both land holdings and poverty are estimated for the period from 1954-55 to 1971-72. A shift in the base of the study from ownership holdings to operational holdings constitutes the difference between the Sanyal’s study and the present study.
1.3 Objectives of the study

The present study has the following objectives with reference to farm poverty at the regional level.

1. To document the dimensions of inter-regional variations in farm productivity.
2. To study analytically the inter-farm cost differentials across regions.
3. To examine the nature of size-productivity nexus at the regional level.
4. To estimate a region-wise break-even holding size.
5. To measure the incidence and depth of farm poverty at the regional level.

In nutshell, this study intends to make an attempt to analytically approach and dissectively comprehend the problem of farm poverty by highlighting a detailed picture of its incidence (measured in terms of operational holdings below the poverty line size of holding estimated on the basis of net farm income) across regions (against the background of overall performance of agriculture at the regional level).

1.4 A note on data and methodology

Proper co-ordination and consolidation of the data published by various departments (a task to be managed with extra caution), has in a sense, created a constructive base and conducive background for conducting a healthy discourse and comprehensive analytical exercise at different stages of the present study.

This study has extensively and exhaustively made use of the data on the size-wise distribution of operational holdings both at the state and district levels. Analytical exercise on examining the structure of operational holdings and its change over the period between 90-91 and 95-96 is facilitated by the highly disaggregated data on land.

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1 Inter-temporal comparison of size-wise distribution of operational holdings at the district level (between 90-91 and 95-96) becomes totally impossible due to the lack of data for 95-96.
holdings (categorized into five broad classes viz, marginal (<1 hectare), small (1-2 hectares), semi-medium (2-4 hectares), medium (4-10 hectares) and large (>10 hectares) collected from various issues of Agricultural Census Reports published quinquennially by the Department of Economics and Statistics.

At another stage, this study has used the data regularly published through various issues of Farm Guide (Farm Information Bureau), Economic Review (State Planning Board), Statistics for Planning (Department of Economics and Statistics) and Data Book on Agriculture (Agriculture Division / State Planning Board).

However, on critical evaluation, certain deficiencies, meriting serious consideration, observed in the data (their scattered and incomparable nature) collected from various governmental publications, have constrained the process of their coordination. Gravity of lapses visible in secondary data has turned to be a critical issue at a stage when data on net farm income\(^1\) per hectare have to be compared with the poverty-line income to estimate a poverty-line size of holding for Kerala. Obviously critical bottleneck of such a dimension is effectively eliminated by basing the core of the present study (Chapter V) on primary data collected from a sample of 400 farm households spread over four panchayats of four districts of Kerala, viz. Alappuzha, Trissur, Palakkad and Wayanad.

Selection of districts as the broad base of this study is monitored by a well-defined set of criteria, i.e., the objective of capturing a geographical coverage along with variations in cropping pattern powerfully influenced this study in the selection of four districts, viz. Alappuzha, Trissur, Palakkad and Wayanad, Multi stage random sampling

\(^1\) An analytical exercise to estimate poverty line holding size, at the aggregate level is conducted on the basis of gross farm income per hectare whereas net farm income per acre constitutes its base at the regional level.
design is adopted from blocks to panchayats. Selection of farm households\(^1\), possessing and operating different size classes of operational holdings\(^2\) is absolutely guided by proportionate random sampling technique where each ample represents any of the four-fold classification of operational holdings. (i.e, <1 acre, 1-2 acres, 2-3 acres and >3 acres) designed independently for the sake of the present study. Broader classification of operational holdings into five, viz <1 hectare\(^3\), 1-2 hectares, 2-4 hectares 4-10 hectares and >10 hectares is not acceptable at a micro level study. A pre-tested questionnaire is used to collect data pertaining to all necessary variables, viz land utilization and cropping pattern of the sample area, mode of cultivation, farm income and cost of cultivation, for the conduct of this study.

Summary statistics like percentages, averages, coefficient of variation, Gini Coefficient, annual average growth rate, simple correlation\(^4\) and multiple

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\(^1\) The broad category of cultivators who have reported agriculture as their main source of income is treated as farm household by this study.

\(^2\) All land which is used wholly for agricultural production and is operated as one technical unit comes under the category of operational holdings. But land owned and operated (lased land used for cultivation) is considered as operational holdings whereas agricultural production includes growing of field crops, fruits, vegetables, sugar crops, spices and condiments, plantation crops, folder gross etc. Grass is treated as a crop if special efforts are made to raise it.

\(^3\) 1 hectare = 2.471 acres or 1 acre = .405 hectare.

\(^4\) Simple correlation is worked out to examine the size-productivity nexus in the sample regions is question.
regression\(^1\) are used in subsequent chapters of this study.

Chapter V, the core chapter of the present study, tries to base its analytical exercises on the tool of averages to estimate crucial variables like cost per acre, yield per acre, average size of households etc. But at a later stage, the technique of simple correlation is applied to examine the nature of size-productivity nexus in the sample regions. Again, multiple regression analysis is carried out to identify the crucial determinants of net farm income per acre in each of the study area. For estimating the incidence and depth of farm poverty in the sample regions, the popular measures of poverty, viz, Head Count Index (HCl) and Poverty Gap Index (PGI) are used. In conclusion, the analytical framework of the present study is so designed as to constitute a broader base for conducting an elaborate discussion on farm poverty against the backdrop of inter-regional variations in farm productivity.

1.5 Scope and Limitations of the study

At the aggregate level, this analytical study on farm poverty is constrained by the non-availability of data on the size distribution of operational holdings at the district level for 95-96. Secondly, due to the lack of disaggregated data on operational holdings, macro level analysis on farm poverty is restricted to the estimation of poverty line size of holding for Kerala for 90-91 and 95-96. Thirdly and more significantly, analytical exercise to compute poverty line holding for Kerala is based on gross farm income per hectare from agriculture for the corresponding years under consideration. To capture a more realistic picture of farm poverty in Kerala, a shift in the base of the study from gross farm income to net farm income is effected in the regional level study. To be more precise, an alternative attempt at examining the problem of farm poverty at the regional

\(^1\) Cost of cultivation is computed on the basis of different items of individual cost incurred on hired male and female labour, fertilizers, pesticides, machine labour, and animal labour. Regression analysis is used to examine the impact of each of component of cost on net farm income per acre of the sample regions.
level is made by basing it on net farm income. Fourthly, for estimating net farm income per acre, certain items of costs, viz., imputed value of family labour, and home-made fertilizers, repair and maintenance charges of implements are not included. All these issues deserve special mention as the major lapses of the present study.

1.6 Scheme of the study

The thesis is organized under six chapters. The first chapter explains the analytical background against which the present study is designed along with its major objectives and limitations. Special attention is paid in providing a brief description about the data used and methodology. Chapter II provides a review of relevant literature on the subject. It has two sections. The first section reviews briefly the earlier studies conducted both at the international and national levels to identify the major determinants of poverty and Section II examines more specifically the intricacies involved in the association between land and poverty. Section 1 has three subsections also.

Chapter III has four sections. Section 1 provides brief discussion on the various concepts of poverty and Section II provides a close examination of the subtle and complex procedure adopted in the construction of poverty lines. Section III presents an elaborate account of the profound theoretical formulations, in vogue, as measures of poverty while Section IV presents the trends and structure of rural poverty in Kerala.

Chapter IV, is structured under three sections. Section I is designed mainly to examine the structural changes in operational holdings in Kerala over a period of five years between 90-91 and 95-96. Section II makes a detailed analysis of the current land utilization and cropping pattern at the state and district levels, variability in productivity of selected major crops extensively cultivated in Kerala and the trends in their farm prices during the period 85-2000 and inter-temporal changes in (90-91 to 96-97) gross income per hectare from agriculture across states (to confirm the belief and to consolidate the position of Kerala as the topper in terms of per hectare income among
Section III makes an attempt in designing a poverty line size of holding for Kerala for 90-91 and 95-96.

Chapter V, the core of this study, presents a detailed picture of the gravity of inter-farm variations in productivity across regions. It also attempts a computational procedure to estimate a break-even holding in order to highlight the incidence and depth of farm poverty at the regional level.

Chapter VI, provides the concluding observations.

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1. These two years are selected as the base of analysis on the presumption that an effective inter-temporal comparison between the distribution of average size of operational holdings (both at the state and district levels) and poverty line size of holding can be made by exhaustively using the data from Agricultural Census Reports (quinquennially published by the Department of Economics and Statistics)