PREFACE

At the outset, I would like to place on record of the sequence of developments that took place in my academic interest as a Government official working in the Districts which I had the chance of interacting and grasping the ideas and aspirations of the rural folk pertaining to the development process. During the period from 1997-99, I came to know that the Planning Commission, Government of India and other central Ministries had replaced the earlier concept planning for the people by the modern concept of planning with the people. The change from ‘for’ to ‘with’ is a turning point adopted by economists, experts and policy makers in translating the theory of decentralized planning into real action. It was really like asking someone to get off from the horse’s back to tame the cattle. Way back in the year 1984, the Report of the Working Group on District Planning, Planning Commission, Government of India, had come out with the recommendations and recognized District as a meeting point of the Top-Down and Bottom-Up Approaches of Decentralized Planning. Block-level planning, micro-level planning, village level planning and other super micro-level planning exercises are the various concepts of decentralized planning. These concepts constitute the hierarchy of planning methodology. Considering the essence of spatial or area planning as an effective tool of planning, the report, inter alia, suggested that even the District Development Commissioner or the District Collector should be adequately trained to acquaint himself or herself with the theories, techniques and methodologies of spatial, regional and areal planning which are technical in nature.

I express my gratitude to the State Government of Meghalaya for deputing me to attend the short-term training courses organized and conducted by the central ministries and the national institutes in India for which the relevant topics are named below. I came to know about the meaning and concept of spatial planning when I attended the training programme on “Decentralized Planning” at the National Institute of Rural Development, NER
Centre, Guwahati, from 2\textsuperscript{nd} to 6\textsuperscript{th} August, 1999. It was on the 5\textsuperscript{th} August, 1999 at 14:15 hours when Dr. K. Haloi, one of the faculty members of the said Institute, who delivered a lecture on the topic “Spatial Planning for Integrated Development” and handed over to the officials (trainees) the reading materials on the course. Thence I began to search the theories and techniques of spatial planning and regional planning which was Greek to me since I did not opt for the paper “Regional Economics” in my Master Degree. In quest of such theories, I found that knowing merely the general economic theories without the element of space does not enable good planners and policy makers to visualize the ground realities in their collective efforts to allocate the scarce resources to the community. Therefore, spatial and economic dimensions constitute the major elements of the present thesis. I attended another training programme on “District Planning In The Context of Infrastructure Development And Employment Generation” organized by the Regional Planning Division, T & CPO, Ministry of Urban Development, Government of India at the Institute of Town Planners (India), New Delhi from the 31\textsuperscript{st} January to 4\textsuperscript{th} February, 2000, the reading materials handed over to the trainees gave strong emphasis on the need of infrastructure and space to conduce growth and development. This became another food for thought as far as the role that an element of space and functions play in buoying up the development process. I have used the word function here not in the mathematical sense but to mean an infrastructure, a service and a facility in a collective sense. The training programme on “Research Methodology for Rural Development Professionals (RMRDP)” from 20\textsuperscript{th} June to 2\textsuperscript{nd} July 2005 at NIRD Hyderabad had further sharpened my knowledge especially the interactions I had with Dr. S.V. Rangacharyulu, Professor & Head, Centre for Information Technology & Quantitative Techniques, NIRD, Hyderabad, on various statistical methods pertaining to planning. All these developments finally ignited my minds to take up a research topic for my Ph.D degree that relate to both spatial and as well as economic dimensions with a view that the findings of the research work will not merely end in book shelves but will help to guide the regional economists,
planners, engineers and policy makers in their day-to-day functioning to induce development. Armed with criteria viz., such as population threshold, distance threshold and the numbers of peripheral settlements, I hope that the findings of the study will help them to rightly decide and provide the appropriate types of functions in the settlements. The findings will also stimulate the students, research scholars and teachers to further their investigations, analyses and to come out with innovative ideas and constructive criticisms.

In my relentless quest for the concept and role of space element, one day, I had a chance of discussing the essence of spatio-economic planning with my former teacher, Dr. S.K. Mishra, Professor Economics Department, N.E.H.U, Shillong who quickly reacted and told me, “If you want to carry out a research on space economy, then you have to abide by Isard”. In fact, prior to that I never heard and knew about Isard and his contributions. Then I asked him who Isard was. In no time he told me that Walter Isard was an economist who carried out extensive research works and popularized the science of space economics and regional science and who was regarded as the ‘father of regional science’. I then began to unfold the journals of the NEHU’s library and left no stone unturned to search about the contributions made by Walter Isard in this field. The two edited volumes viz. *New Frontiers in Regional Science, Volume-I* and *Dynamics and Conflict in Regional Structural Change, Volume-II*, both are Essays in Honour of Walter Isard edited by Manas Chatterji and Robert E. Kuenne enlightened me about the life, works and contributions of Professor Isard besides his articles that are available in the *Quarterly Journal of Economics*. Since then I made up my mind to carry out a research on space economics that culminated in taking up the topic “An Analysis of Spatio-Economic Dimensions in Micro-Level Planning: A Case Study of Nongtrai Area in Meghalaya”. I finally realized that Space Economics is one of the areas of research that reveals the reality of life.

Space economy is an economy where the space element is recognized and included for analysis and operational purposes. Besides other economic
dimensions, spatial inputs comprising the distance input or transport input and areal input as variables are ingrained in space economy. The distance input when measured in a monetary unit is called a transport cost. Space economy in its restricted sense refers to that type of economy which is looked at from the spatial point of view. It usually describes in terms of the location of production units i.e. firms, information, consumers’ centres and settlement patterns of the given area or region and their interactions. The element of space is thus conceptualized as an areal and as well as a linear entity. Though geographers were ahead of economists in dealing with space as a physical entity including human activities that it contains but their works remain only within the geographic space. They left out the economic aspects of human activities and resources needed for growth and development. Even economic geographers do not study the substitution effects of transport inputs and labour, prices, quantity, demand for transport, equilibrium analysis etc., which are generally taken care by economists. They also exclude other important subjects viz., Transport Economics, Regional Economics etc which are the major components of the space. Therefore, the study of space element by the geographers alone in their own perspectives is hackneyed by their non-inclusion of economic theories in their analytical frameworks which development strategists talk about. Space economics, thus reduces the conservatism of disciples that exists among the geographers, economists, sociologists and other disciplines.

The socio-economic growth of any country, region, state or district does not foster uniformly at the same scale and time. Moving on with the tenets of resource utilization and service provisioning capacities, settlements of different sizes and patterns have emerged in the physical landscape side by side with the cultural landscape. Consequently, all settlements are not equally significant in areal functional organization of any spatial system. Nongtrai area is a classic example of backwardness. This happens due to the absence of appropriate functions despite the country’s tall achievement in the recent past. Technically speaking, it can be aptly described as a depressed area. The
whole area has not been adequately placed on the parabola of progress and growth trajectory and thus the rate of investment is not proportionate to the population sizes of settlements. This has choked the development process and the needs of people who are the aspirants of development. To activate the cycle of development in any particular micro-region, a multi-dimensional approach covering important dimensions like spatial, economic, social, cultural dimensions etc. is of great utility. The objectives can be achieved through the operation of market mechanism and the application of public policy in right perspectives. Lack of basic infrastructures poses severe economic handicaps in the area and as such the scope of performing economic functions through market mechanism is very limited and hence requires strong intervention of public policy. Although some parts of the States in the North Eastern Region have achieved some degree of progress, this has not been sufficient to propel the region out of its low equilibrium to a higher sustainable growth path in GDP. More importantly, the inclusive growth that requires rapid increase in employment, significant improvement in human development, particularly of the disadvantaged sections of society indicates a sharp decline. Hence, to place the backward area or region in the path of progress, a systematic investigation of the underlying factors of backwardness is imperative. It may perhaps be pointed out that the present study does not concern with the determination of a poverty line, absolute, relative poverty etc of this area but aims at assessing the infrastructural gaps and role and impact of space element in the development process. So far no systematic study on the interplay of the backward and forward linkages has been carried out in this particular depressed area and local economy and as a result the farmers remain poor and poorer and they continue to remain in a state of abject poverty for farm outputs are neither market-oriented nor self-sufficient. This has prompted us to take up the present study with a view to identify the frictions and the constraints that impede the economic development of this area and to prescribe policy measures to ease such problems. Therefore, the present thesis studies the hierarchies of settlements, functions, correlations
between population and CFI etc. in Nongtrai area and accordingly appropriate measures (both policy and non-policy) are prescribed to place the economy in the ‘take-off’ stage. In short the study examines the underlying factors responsible for backwardness and explores solution to redress the critical infrastructural gaps in delivery services in this area. The central theme of the research is to identify the different ordered-functions available in the area and devise solution to unravel the developmental conundrum.

I can not also put into oblivion of the enthusiasm that I derived from my friends viz. Mr. B. Syiem, Head of Economics Department, Shillong College, Shillong, Mr. Kamaljit Singh, Lecturer, Economics Department, St. Anthony’s College, Shillong and Mr. S.D. Tynsong, Lecturer, Commerce Department, Kiang Nangbah Government College, Jowai. In our heuristic approach, one day in the year 2006, we went down to Gauhati University and met Professor M.P. Bezbaruah who was heading the Economics Department of the Gauhati University at that time and who was kind enough and encouraged all of us to take up the research work. Due to the heavy official works, the research work would not have taken off had Professor M.P Bezbaruah not helped me and put the job at the right anvil ab initio. He even organized a one-day workshop to all the newly admitted research scholars on the method of writing and presentation of Ph.D thesis which helped me a lot. It was due to his encouragement that I have enrolled myself as the life member of The Indian Econometrics Society (TIES) during the auspices of the 45th Annual Conference of TIES which was held at Gauhati University campus from the 8th to 10th January, 2009. All these developments have further sharpened my academic insight and acumen in completing the Ph.D. The sustainable interactions and advice I used to receive from him have enriched and enabled me to submit my thesis in a timely manner. His inspiration and magnanimity ignited my minds to delve deeper into the sea of knowledge. I offered a deep sense of gratitude to him. I would also like to place on record my gratefulness to Dr. N.A Baruah, a Senior Lecturer, Economics Department, Gauhati
University who from the beginning of my research work, has put my synopsis in the proper and final shape for recommendations by DRC.

In preparing this thesis, I have been benefited greatly by the writings of many scholars-Indian as well as foreign that are available in books, journals and websites. The list of bibliography is furnished at the end of the thesis. I consider myself very fortunate to have Dr. G. Bordoloi, former Head of Economics Department, Handique Girl’s College, Guwahati as the guide for my research work. I would like to express my special gratitude to him for his immense support and encouragement at every stage of my Ph.D work. It was his constant inspirations that the research work took off immediately after my Ph.D admission. I have been greatly benefited from his guidance, knowledge, expertise and research insights which have enabled me to prepare and put the thesis into its final shape. I also would like to place on record of my gratefulness to Professor (Mrs.) A. Sarma, the former Head of Economics Department, Gauhati University who at the time of my presentation of seminar for final registration, suggested me to also read and incorporate the Geography journals and books involving a discussion on the element of space.

I am also grateful to my friend Dr. D.G. Nongkhlaw, Head of Geography Department, Synod College, Shillong, who unveiled the richness of his home library and made me accessible for consultations and reference for my research work and who also introduced me to Dr. N.P Goel, Assistant Professor, Department of Adult & Continuing Education, NEHU. I express my thanks to Dr. Goel, who rendered technical assistance in running a computer programme for regression analysis of Chapter-IV. I must record a special debt of gratitude to all the teachers of Gauhati University for their valuable co-operation and suggestions. I also express my thanks to Mr. T.M. Roy, Assistant Superintendent of the Establishment Branch, Gauhati University for administrative guidance whenever I needed since the time when he was working as the UDA in the Academic Section. I am very much thankful to my wife Mrs. P. Dkhar, who always attended to the domestic works thereby
enabled me to devote more time to complete my Ph.D work and also to my son Mr Maldoveral Dkhar for computer typing of diagrams.

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I shall be failing in my duty if I do not acknowledge here the help and co-operation I received from the staff and librarian of the K.K Handique Library, Gauhati University, Library N.E.H.U University, Shillong Library, NIRD, Hyderabad, Institute of Town Planners (India) and New Delhi. The availability of the rare book entitles *Location and Space-Economy (1956)* by Walter Isard at the K.K Handique Library has saved time, energy and money instead of visiting the library of IIT, Kharagpur for the same. The tremendous stimulation I derived from this book cleared the way of obstacles which often beset my mind as far as the concept and application of space in economics. This book which I looked for is a masterpiece on the subject and is not available even in the library of the School of Planning and Architecture (SPA), New Delhi, when I consulted. It thus deserves special mention here for the benefit of the readers.

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