

103

ECONOMIC BASE THEORY OF URBAN GROWTH: A REVIEW

GOKHALE INSTITUTE OF POLITICS AND ECONOMICS

PUNE 411 004

MAY 1991

**ECONOMIC BASE THEORY OF
URBAN GROWTH : A REVIEW**

**A DISSERTATION SUBMITTED TO THE
UNIVERSITY OF POONA
IN PARTIAL FULFILMENT OF THE REQUIREMENT
FOR THE DEGREE OF
MASTER OF PHILOSOPHY
(IN ECONOMICS)**

**BY
ABHAY G. TILAK**

**GOKHALE INSTITUTE OF POLITICS AND ECONOMICS
PUNE 411 004.**

MAY 1991

ACKNOWLEDGEMENTS:

The completion of this dissertation was more of a relief than accomplishment for me. Whatever element of accomplishment is accruable to me, I am fully aware, owes its origin to the help and guidance that I received from my guide, teachers and my friends over the period of last three and half years. I take this opportunity to express my deep gratitude to all of them, knowing fully well the limitations of words, which is too weak a medium to convey the true feelings.

I am extremely happy that I was able to work under the guidance of Prof. Venkatramiah, as he accepted me as his M.Phil student. Even though he seldom scolded me for delay in the work, I was able to perceive his worry, eagerness and the mounting tension on him, as my work was getting prolonged. His silent but close vigilance had been an 'Invisible Guiding Hand' which kept me working over the past three and half years. His fine and sharp analytical abilities and acute perception of the subject gave this thesis its final shape. I am greatly indebted to Dr. Latika Argade, with whom I had several discussions which lasted for hours together. Her patient and painstaking guidance, discussions and reading of the earlier drafts were of tremendous help to me.

It was the extreme kind hearted and accommodative nature of Dr. A.P.Kulkarni, Director, Centre of Studies in Social Sciences, Pune, that I was able, in the first instance, to register myself for M.Phil programme in 1987. He allowed me the total freedom and flexibility as far as the office timings are concerned, as I was working with him, at that time.

I could pursue my dissertation as well as job together, later on, only due to the benevolence and fatherly treatment extended to me by respected persons like Nilubhau Limaye, Vasant Bapat and Shri P.K.Garde, as I have been associated with the project launched by "Shri Nilubhau Limaye Pratishthan", Pune. While working on this project, I have been the beneficiary of an elderly advice and guidance of Dr. Aroon Tikekar. His co-operation and extremely accommodative nature allowed me to pursue my dissertation and the project work side by side.

The collection of requisite references was feasible only due to an extensive cooperation that I received from the entire Library Staff of the Servants of India Society's Library. Besides this, I must express thanks to the personnel and the staff of other libraries of Pune University, Bombay University, Times Research Foundation, National Institute of Bank Management and the Centre for Development Studies and Activities, Pune.

I owe a lot to all my teachers in the Gokhale Institute of Politics & Economics, as well as other staff members.

I cannot express my happiness and sense of respect towards my father who did a fine typing of the manuscript out of my "affectionate compulsion".

Abhay G. Tilak

Gokhale Institute of
Politics and Economics,
Pune - 411 004.

TABLE OF CONTENTS:

ACKNOWLEDGEMENTS	(i)
LIST OF TABLES	(iv)
LIST OF FIGURES	(iv)
LIST OF CHARTS	(iv)
INTRODUCTION	(v-xi)
1. <u>URBANIZATION: AN OVERVIEW.</u>	1 - 33
1.1: Basic Concepts and Definitions.	1
1.2: Emergence and Growth of Cities.	8
1.3: Urbanisation: A Global View.	18
1.4: Urbanisation: Indian Experience.	20
2. <u>URBAN GROWTH: NETWORK OF THEORIES.</u>	34 - 43
2.1: Introduction.	34
2.2: Network of Theories.	35
2.3: "Layer" Theory and Indian Urbanization.	42
3. <u>ECONOMIC BASE FRAMEWORK.</u>	44 - 121
3.1: Introduction.	44
3.2: Evolution of the Theory.	45
3.3: Choice of the Unit of Base.	59
3.4: Methods of Base Measurement.	69
3.5: Utility of the Base Estimates.	115
4. <u>CONCEPT & USE OF EMPLOYMENT MULTIPLIER.</u>	122-142
4.1: Base Ratios and the Exercise of Population Projection.	122
4.2: Base Ratio & Employment Multiplier.	124
4.3: Kahn's Conception of a Multiplier.	127
4.4: Stability of the Base Ratio and Employment Multiplier.	129
4.5: Factors Affecting the Base Ratio.	131
4.6: Employment Multiplier & the Lags in the Realization of its Full Impact.	135
CONCLUSION.	143-145
BIBLIOGRAPHY.	146-153

LIST OF TABLES:

1.1(a) :	Proportion of Population Living in Urban areas by Major Regions: 1970 - 2025 A.D.	19
1.1(b) :	Rate of Urbanization by Major Regions: 1970 - 2025 A.D.	19
1.2 :	Average Annual Growth Rate of Urban Population by Major Regions: 1970 - 2025 A.D.	20
1.3 :	Degree of Urbanization: India 1951 - 81.	22
1.4 :	Urban Units their Population and Average Size of an Urban Unit.	23
1.5 :	Degree of Urbanization and the Urban Population of 9 highly Urbanized States of India: 1981.	24
1.6 :	Level of Urbanization and Decadal, Annual Growth Rates of Urban Population of Five Large States of India.	25
1.7 :	Distribution of Urban Population into Different sizes of Towns: 1981.	26-27
1.8 :	Percentage Share of 'Cities' (Class I Towns) in Urban Population: 1961, 1971 & 1981.	27-28
1.9(a) :	Migration Streams: 1971 - 81.	30
1.9(b) :	Rural - Urban and Urban - Urban Migrants Among Internal Migrants: India: 1971 and 1981.	30

LIST OF FIGURES:

1.	Export Earnings as an "Injection" in an Urban Area's Income Flow.	49
2.	A Schematic Presentation of the Emergence and Growth of Local Activities Following the Development of Base Enterprises.	51

LIST OF CHARTS:

1.	Functional Dichotomy and Intersectoral Linkages Among Economic Activities of an Urban Area.	56
----	---------------------------------------------------------------------------------------------	----

I N T R O D U C T I O N

" Over the past four decades, the number of people living in India has more than doubled - From 350 million in 1947 to nearly 800 million today. During the same period, our urban population has been growing almost twice as fast, and has in fact quadrupled from 50 million in 1947 to over 200 million in 1988. In next thirteen years, i.e. by 2001, it is expected to reach 350 million " (*)

Urbanisation and urbanism is an inseparable aspect and experience of daily life for every city dweller. We all are beneficiaries of delights of city life and at the same time are helpless victims of unplanned and uncontrolled urbanisation. Proliferation of slums and shanty settlements, congestion on roads, overcrowding in Central cities, are all the manifestations of unchecked city growth. No doubt that the process of urbanisation, which as Mills and Becker (1986) put it, occurs, "because of massive shift of labour and capital from predominantly rural to predominantly urban activities in the course of economic development", (1) is an indication as well as a resultant of the overall process of an advance of economy. But unplanned, uncontrolled and uneven urbanisation in many parts of the Third World has caused an alarming concern among the administrators, city planners, environmentalists and academicians.

(*) Report of the National Commission on Urbanisation Vol.I August 1988. P = 1.

The designing of appropriate and effective remedial urban development policies call for an indepth understanding of the factors which cause and govern the process and pattern of urbanisation. A detailed analysis of various inter-relations among economic, demographic, social and political factors whose simultaneous interactions exert their combined influences on the growth of an urban area, is a necessary prerequisite for effective policy formulation and implementation. The present study makes an attempt to review one of the basic theoretical formulations of urban growth viz. the Economic Base Framework. Before we highlight the basic postulates of this theoretical framework, it would be appropriate to have a better perspective of the much broader discipline of Regional Science on the background.

A revival of interest in Regional Science, as a special field of study and research, began in late '40s and early '50s. Regional Science is essentially an interdisciplinary, umbrella concept. As Prof. Miernyk (1976) defines it, " Regional Science is the study of those social, economic, political and behavioural phenomena which have a spatial dimension", (2) and hence it crosses over the boundaries of several disciplines such as Economics, Sociology, Geography, Anthropology, Ecology, Politics and so on. The contribution of these various sciences to this much broader area of analysis has been neatly identified and presented in an article by Prof. Morris E. Garnsey (1956) (3).

As described by Prof. Garnsey, economics has contributed in several ways to Regional Science. As he states it, " many of the relevant conventional methods of Economics are being

consolidated into a new generalised type of theory of Industrial Location particularly applicable to regional analysis ". (Garnsey 1956).⁽⁴⁾ Besides this he proclaims that the general economic theory has contributed several tools, concepts and methods of interregional and international trade to the development of a branch of regional economic analysis which devotes itself to the study of comparative regional analysis of income levels, commodity flows and balances of interregional transactions. This is the arena of what we call now "Regional Economics". Studies in the field of regional economics gathered momentum in mid '50s. According to Prof. Meyer⁽⁵⁾ who wrote a survey article on regional economics in the 1963, volume of American Economic Review, the sub-discipline of Regional Economics primarily comprises of the following aspect of analysis.

1. The Location theory ;
2. The interregional and international Multiplier analysis; ^(*)
3. Leontief's interindustry input output analysis; and
4. Mathematical programming.

Urban economics, as a separate field of research became strengthened in early 1960s. As Goldstein and Moses (1973)⁽⁷⁾ point out in a survey article, a large amount of literature has grown up in the field of urban economics which can broadly be classified into the following branches viz.

1. Studies of composition, growth and spatial form of urban areas; and

(*) In another survey article on Regional Economics, by Richardson (1978)⁽⁶⁾ the Economic Base framework and the Multiplier analysis is described as the "Oldest and simplest" forecasting model in regional economics.

2. Analysis of problems of urban areas such as congestion, growth and spatial form of urban areas; and employment and so on.

As Goldstein and Moses describe, "Most approaches to urban growth are demand-driven and are exercises in comparative statics rather than dynamics". (Goldstein & Moses 1973)⁽⁸⁾. The two main demand driven urban growth theoretical frameworks are:

1. The Central Place theory developed by Christaller; and
2. The Economic Base theory. (1964)⁽⁹⁾

The model developed by Borts and Stein views urban growth from the supply side This was later on modified by R.F.Muth .

The scanning of the literature on urban growth reveals that, the Economic Base Framework which emerged in its most organised form for the first time in mid 1920s, has been extensively studied, reviewed, modified and tested empirically over the period of last 65 to 70 years. The theory has been in continuous light for all these years. It has been reviewed and updated from time to time in concurrence with the changing realities of urban growth in the Developed as well as Developing nations. On account of this, it was thought that a review of emergence and subsequent developments of the basic tenets of the theory would be of help in understanding and analysing the process of urban growth. Incidentally, the theory was applied and tested in the case of Pune recently; and the study has been published in February 1991.

The present study has been devoted to the review of the Economic Base theory of urban growth. The growth of an urban area, according to this framework, is triggered off by the

establishment and growth of "Export" or "Basic" activities of the region. The 'Export' or 'Base' activities are defined to be those which primarily cater to the outside, non-local markets. These activities earn a net inflow of money/wealth for the community, which provides the necessary impetus for the growth of the web of local activities. Therefore, the theory postulates that the initial or original change/disturbance in the 'Basic' sector of the region exerts a 'Multiple' impact on the entire urban area. Thus the concept of 'Multiplier' is an integral part of the Economic Base theory. The Multipliers are mainly of two types viz. the Employment Multiplier and the Income Multiplier. As data regarding employment is generally easily available at the sub-national level, most of the Base studies use employment as a unit of Base.

The thesis contains in all six chapters including Introductory and Concluding chapters. The present chapter is followed by a Chapter which provides an overview of the urbanization process. (Chapter 1). This chapter consists of in all four sections. The first section deals with the basic concepts and definitions of various terminologies. The second section presents an elaborate account of the emergence and growth of cities. Section three presents a global view of the urbanisation process. The last section i.e. section 4 reviews the urbanization experience of India. Chapter 2 provides a concise account of some of the main theoretical formulations of urban growth. Chapter 3 is devoted to the presentation and discussion of the fundamental tenets of the Economic Base framework. This chapter is divided into three sections. The first section is devoted to the understanding of the basic postulates of the Economic Base theory.

The second section summarises the discussion about the choice of various units of and suitability of Base identification and measurement. The last section of the chapter reviews the main techniques of Base measurement. The subsequent chapter (chapter 4) discusses the concept of Employment Multiplier. As majority of the Base studies use employment as a unit of Base due to its easy availability and the policy implications that the unit has as far as Urban and Town Planning is concerned, the discussion is primarily about the theoretical concept and the empirical usage of the Employment Multipliers. This, of course, does not undermine the importance and utility of Income Multipliers, but the focus has been set on the Employment unit of Base.

REFERENCES:

1. Mills and Becker (1986): Studies in Indian Urban Development: Published for the World Bank, Oxford University Press, Washington D.C., P = 14.
2. Mierynk, W.H. (1976): " The Realism and Relevance of Regional Science" as quoted by Richardson, H.W.(1978) "The State of Regional Economics: A Survey Article: International Regional Science Review: Vol.3, No.1, P = 1 (Foot Note).
3. Garnsey, M.E. (1956): The Dimensions of Regional Science: Papers and Proceedings of the Regional Science Association: Vol.2, PP. 27 - 39.
4. Ibid: PP = 36 - 37.
5. Meyer, J (1963): Regional Economics: A Survey: American Economic Review: Vol.53, PP = 29 - 30.
6. Richardson, H.W. (1978): The State of Regional Economics: A Survey Article: International Regional Science Review: Vol. 3, No. 1. P = 11.
7. Goldstein, G.S.; and Moses, L.N.(1973): A Survey of Urban Economics: Journal of Economic Literature: Vol.11, No.2, PP = 471 - 575.
8. Ibid: P = 472.
9. Borts, G.H., and Stein, J.L. (1964): Economic Growth in a Free Market: Columbia University Press, New York & London: PP = 124 - 161.