

OPTIMAL ECONOMIC GROWTH: SOME THEORETICAL EXPLORATIONS

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PREFACE

Vast literature exists on the static analysis of Economic Growth Theory. In the dynamic context, the last decade has witnessed several developments in the Theory, most of which are devoted to the study of steady-state growth paths. This thesis is an attempt to analyse some interesting aspects of the dynamic theory of Optimal Economic Growth with a general framework; existence and characterisation of optimal growth paths, multicriterion optimality, inverse optimal solutions and rolling optimal plans. Though major attention is paid to the deterministic case, some problems in stochastic economic systems are also taken up.

In the tenure of my research work, I am benefited by the cooperation of several people and I shall be failing in my duty if I do not mention the names that should properly be included. I am indebted to Professor V.S. Rajamani and Dr. Suresh Chandra for their valuable comments and guidance. I owe to Professor Subramanian Swamy (now Director, Deendayal Research Institute, New Delhi and Member of Parliament) more than what I can possibly express for his valuable comments, constant encouragement and multivarious help ever since I started my research work under his inspiring guidance. I am grateful to Professor V.K. Chetty of the Planning Unit, Indian Statistical Institute, New Delhi for stimulating discussions especially on the Appendix. I take this opportunity to express my gratitude to Professor C.R. Rao, FRS, Director, Indian Statistical Institute, to Professors K.R. Parthasarathy, M.P. Singh and M.K. Jain of the Mathematics Department, Indian Institute of Technology, New Delhi, for their kind

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October 2, 1971

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CERTIFICATE

This is to certify that the thesis entitled
"Optimal Economic Growth: Some Theoretical Explorations"
which is being submitted by Mr. P. Krishna Rao for the
award of the degree of Doctor of Philosophy, is a record
of bonafide research work. The thesis satisfies the
requirements for its submission. The results in this
thesis have not been submitted to any other University
or Institute for the award of any degree or diploma.

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