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characteristics; The dominant innovation stimulus: technology-push versus demand-pull hypothesis; The interfirm variation in R&D expenditure: Mansfield's model
Chapter four Market structure, rivalry, and innovation Market structure, R&D expenditure, and innovation: the Nordhaus model; Perfectly competitive industry with no spill-over effect; Oligopoly with free entry and a spill-over effect; The socially managed industry; Innovation, demand, and market structure: the Dasgupta-Stiglitz model; Process versus product innovation: the optimal mix under free entry; Oligopolistic (with free entry) versus socially managed industry when the spill-over effect is present; A note on strategic innovation
Chapter five Behavioural and evolutionary versus neoclassical theory of technical choice and innovation Key principles of the neoclassical theory of technical choice; The choice of techniques under perfect competition in an n -sector economy; Criticisms of the neoclassical theory; Natural selection and the evolutionary thesis; The 'behavioural approach'; The Nelson-Winter 'evolutionary' model of technical choice and innovation; Chapter six Innovation diffusion: theory and evidence; Two key stylized facts of innovation diffusion
Mathematical theory of spread of information and the logistic curve The Mansfield model; The Davies model; Some empirical findings; The game-theoretic approach: a model by Grindley; Chapter seven The behaviour of enterprises and innovation characteristics in centrally managed economies; The paradox of a high inefficiency and (until the late 1970's) respectable innovation rate; The discipline of the plan and the freedom of the firm; Systemic characteristics and policy aspects of innovation in centrally managed economies; Major systemic characteristics of the innovation process
The effects of Hungarian-type reforms

Sommario/riassunto

In this wide ranging exposition of the various economic theories of technological change, Stanislaw Gomulka relates them to rates of growth experienced by different economies in both the short and the long term. Analysis of countries as diverse as Japan, the Soviet Union and the United Kingdom demonstrates that there is an interdependence between technological change and the institutional and cultural characteristics of different countries, which can have a profound effect on their rates of growth. All of the major, relevant models are discussed, including those of Kuznets and Phelps,