## Contents

Tables	ix
Figures	xi
Preface	xiii
ONE. Introduction  Hans P. Binswanger and Vernon W. Ruttan	1
PART I INDUCED TECHNICAL CHANGE AND DEVELOPMENT	
TWO. Induced Technical Change: Evolution of Thought  Hans P. Binswanger	13
THREE. Factor Productivity and Growth: A Historical Interpretation Vernon W. Ruttan, Hans P. Binswanger, Yujiro Hayami, William W. Wade, and Adolf Weber	44
PART II THE THEORY OF INDUCED TECHNICAL CHANGE	
FOUR. The Microeconomics of Induced Technical Change Hans P. Binswanger	91
FIVE. Issues in Modeling Induced Technical Change Hans P. Binswanger	128
SIX. Technology Transfer and Research Resource Allocation Robert E. Evenson and Hans P. Rinsvanger	164

## viii CONTENTS

## PART III

SOME CASES AND TESTS

SEVEN. Measured Blases of Technical Change: The United States  Hans P. Binswanger	215
EIGHT. A CES Test of Induced Technical Change: Japan Patrick Yeung and Terry L. Roe	243
NINE. Aggregate Demand and the Rate of Technical Change Uri Ben-Zion and Vernon W. Ruttan	261
TEN. Biased Choice of Technology in Brazilian Agriculture John H. Sanders and Vernon W. Ruttan	276
ELEVEN. Social Structure and Biased Technical Change in Argentine Agriculture	
Alain de Janvry	297
PART IV INDUCED INSTITUTIONAL CHANGE	
TWELVE. Induced Institutional Change Vernon W. Ruttan	327
THIRTEEN. Induced Innovation and the Green Revolution Vernon W. Ruttan and Hans P. Binswanger	358
FOURTEEN. A Postscript on Alternative Paths of Induced Institutional Change	
Vernon W. Ruttan	409
Contributors	415
Index	417