## Contents

_Acknowledgments_ ix

_List of abbreviations_ xi

1 Introduction 1
   1.1 Introduction 1
   1.2 Catch-up and leapfrogging at the economy level 4
   1.3 Catch-up and leapfrogging at the sector level 8
   1.4 Catch-up and internationalization by big businesses and SMEs 10

**PART I CATCH-UP AND LEAPFROGGING AT THE ECONOMY LEVEL**

2 Historical origins and initial conditions for economic catch-up 15
   with H. Y. Lee
      2.1 Introduction 15
      2.2 Historical reflections on the degree of state activism in East Asia 16
      2.3 Capacity and autonomy of the hard Confucian states 19
      2.4 The nature of state activism in Korea 22
      2.5 The regimes for economic catch-up: a summary 27

3 Korean model of catch-up development: a “capability-based view” 30
   3.1 Introduction 30
   3.2 Capability building and successive upgrading as the essence of the Korean model 31
   3.3 The process of catch-up: some elaborations 39
   3.4 Summary of the process in terms of capability building and learning 45
   3.5 Criteria for sectorial specialization and leapfrogging 48
   3.6 Transferability and lessons of the Korean model 52
4 Intellectual property rights and technological catch-up in Korea

   with Y.K. Kim

   4.1 Introduction
   4.2 Finding regularities in catch-up with IPR variables: three facts and four stages
   4.3 Evolution of the IPR regimes and catch-up in Korea: 1960s to present
   4.4 The impacts of IPR on firm-level catch-up
   4.5 Summary and concluding remarks

5 From miracle to crisis and the mirage of the post-crisis reform

   with C. Lee

   5.1 Introduction
   5.2 The partial reforms in the pre-crisis era, 1980–96
   5.3 Reform measures and outcomes in post-crisis Korea
   5.4 Global standards, local specificity, and interest group politics
   5.5 Final reflections

6 Maintaining macro-stability for a crisis-resilient growth in Korea

   with J. Kim, H. Kim, and H.S. Song

   6.1 Introduction
   6.2 Theoretical framework and interpreting the crises
   6.3 Macro-level reform issues for financial stability
   6.4 Micro-level reform issues for financial stability
   6.5 Summary and concluding remarks

7 Is leapfrogging-style reform possible in North Korea?

   with B.Y. Kim and I.S. Yee

   7.1 Introduction
   7.2 Model for leapfrogging-style reform
   7.3 Assessing the possibility of leapfrogging in North Korea
   7.4 Using FDI to leapfrog
   7.5 Concluding remarks

PART II CATCH-UP AND LEAPFROGGING AT THE SECTOR LEVEL

8 Catch-up and leapfrogging in six sectors in the 1980s and 1990s

   with C. Lim
# Contents

8.1 Introduction 167
8.2 The model of catching-up in technological capabilities and markets 169
8.3 The trend of market catch-up in the Korean industries and the technological characteristics 175
8.4 The winning and losing stories of catching-up 182
8.5 Several policy-related issues 197
8.6 Concluding remarks 203

9 Digital technology as a window of opportunity for leapfrogging: the display industry 207
   with C. Lim and W. Song
   9.1 Introduction 207
   9.2 The literature and theoretical framework 209
   9.3 Technological regimes of digital TV and the initial resource base of the Korean firms 212
   9.4 The process of leapfrogging: overcoming the disadvantages 216
   9.5 Synthesis and comparisons 223
   9.6 Concluding remarks and policy implications 227

10 Technological catch-up in the capital goods sector 231
   with Y. Kim
   10.1 Introduction 231
   10.2 Importance of the capital goods industry and the Korean experience 232
   10.3 Sectoral systems of innovation and the machine tools industry 235
   10.4 The three barriers to catch-up in the capital goods industry 239
   10.5 Opportunities for catch-up 243
   10.6 Summary and concluding remarks 245

PART III CATCH-UP AND INTERNATIONALIZATION BY BIG BUSINESSES AND SMEs

11 Samsung, created in Korea and replicated overseas 251
   with X. He
   11.1 Introduction 251
   11.2 Capability of business groups: a theoretical consideration 252
   11.3 Creating vertical integration in Korea: Samsung affiliates in electronics 257
Economic catch-up and technological leapfrogging

11.4  Replicating the vertical integration in Mexico and Malaysia  259
11.5  Replicating the same vertical integration in China  260
11.6  Power of vertical integration in the display market  266
11.7  Conclusions  270

12  Moving factories overseas and impacts on domestic jobs: the case of Samsung  273
   with M. Jung
   12.1  Introduction  273
   12.2  The rise of Samsung’s mobile phone business and its overseas factories  276
   12.3  Impacts on domestic employment and its composition  281
   12.4  Coping with the possibility of technological hollowing out  281
   12.5  Summary and concluding remarks  286

13  Catch-up and path-creating by SMEs: from OEM to OBM  288
   with J. Kwak and J.Y. Song
   13.1  Introduction  288
   13.2  Literature and research questions  290
   13.3  Research design and case profiles  292
   13.4  Dynamic catching-up process: OEM–ODM–OBM  295
   13.5  Synthesis: dynamic path of latecomer SMEs  304
   13.6  Concluding remarks  306

14  Sequential internationalization of Korean SMEs in China  310
   with H. Lee and J. Kwak
   14.1  Introduction  310
   14.2  The existing theories and development of a new theory  313
   14.3  Proposing a model of sequential internationalization for SMEs  315
   14.4  Research design and profiles of sample firms  320
   14.5  Explaining the process of internationalization  328
   14.6  Summary and concluding remarks  331

References  333
Index  361