Economic Development of Taiwan
Early Experiences and the Pacific Trade Triangle

Frank S T Hsiao
University of Colorado at Boulder, USA

Mei-Chu Wang Hsiao
University of Colorado at Denver, USA
Contents

Sources of the Chapters  xv
Acknowledgments  xix
About the Authors  xxi

Introduction  1

Part I  Overview of Economic Development of Taiwan  15

Chapter 1. Taiwanese Economic Development and Foreign Trade  17
  1.1 Introduction  17
  1.2 A Brief Historical Background of Taiwan  21
  1.3 Industrialization under the Japanese Regime  22
  1.4 The Japanese Legacy  27
  1.5 Economic Development Immediately after World War II  31
  1.6 Initial Conditions  50
  1.7 Recovery and Import Substitution Period (1953–1963)  52
  1.8 A Review of Early Post-War Development  85
  1.9 Some Basic Indicators of Economic Development  87
  1.10 Stages of Economic Development after 1964  93
  1.11 Trade Policy Reform  101
  1.12 Development and Trends of Foreign Trade  104
  1.13 Taiwan, Japan, and the U.S. Nexus  112
Chapter 2. Taiwan in the Global Economy
— Past, Present, and Future 171

2.1 Introduction 171
2.2 Taiwan is a Large Country in the Global Economy 175
2.3 An Overview of Early Taiwanese History from an International Perspective 177
2.4 The Taiwanese Economy before the 19th Century 183
2.5 Taiwan in the Global Economy during the Japanese Period 187
2.6 Postwar Taiwan in the Global Economy 197
2.7 Direct Foreign Investment and Economic Growth 208
2.8 Taiwan and the Global Economy in the 21st Century 216

Appendix 2A: Export Promotion Policy May Not Be Sustainable 226
Acknowledgments 227
Statistical Data Sources 227
References 228

Chapter 3. Taiwan in the Global Economy
— End of the “Miracle”? 237

3.1 Taiwan’s Economic Evolution: Agrarian to High-Tech 237
3.2 Taiwan’s Domestic Economy 238
3.3 Taiwan’s External Economy 241
3.4 Foreign Exchange and Global Competitiveness 243
Contents

3.5 The "Republic of Technology: Information and Communications" 244
3.6 Taiwan's Economic Prospects 246
3.7 Deepening Relations with China 248
3.8 Taiwan and Its Major Trading Partners 250
3.9 Worsening Domestic Economy 253
3.10 Conclusions — Taiwan's Economy at the Crossroads 257

Appendix 3A: Summary Table of Sections 3.2 to 3.4 260
Acknowledgments 260
References 261

Part II Japanese Colonial Linkages 265

Chapter 4. Colonialism or Comparative Advantage? — On Agricultural Development in Colonial Taiwan 267
4.1 Introduction 267
4.2 Natural Environments 269
4.3 Agricultural Development 271
4.4 Agricultural Growth 274
4.5 International Comparisons 278
4.6 Other Primary Industries 281
4.7 Development in Other Japanese Colonies 284
4.8 Some Concluding Remarks 290
Acknowledgments 292
Statistical Data Sources 292
References 293

Chapter 5. Colonial Linkages in Early Postwar Taiwanese Economic Development 297
5.1 Introduction 297
5.2 A Brief Account of Taiwanese Economic Development 299
5.3 Prewar Peak and Postwar Recovery 302
5.4 Linkages between the Two Periods 308
5.5 Some Concluding Remarks 319
Appendix 5A: Sources and Explanations for Figures .................................. 320
Acknowledgments .................................................................................. 322
References .............................................................................................. 322

Chapter 6. The Historical Traditions of Taiwanese Small-and-Medium Enterprises
— Origins of Taiwanese Capitalism .......................................................... 325

6.1 Introduction .................................................................................. 325
6.2 The Dual Industrial Structures in Taiwan ......................................... 326
6.3 Characteristics and Significance of Taiwanese SMEs ......................... 328
6.4 Contribution of the SMEs to Exports ................................................. 332
6.5 A Consistent Comparison of the SMEs over Time ............................... 334
6.6 The Taiwanese Trade in the 17th Century ........................................... 338
6.7 Development of Taiwanese Capitalism .............................................. 340
6.8 Taiwanese Capital under the Japanese Government .......................... 344
6.9 Prewar Growth of Taiwanese SMEs .................................................. 348
6.10 Taiwanese Enterprises after the War ................................................ 350
6.11 Colonial Linkages of SMEs ............................................................ 353
6.12 The Origin of SMEs .................................................................. 359
6.13 On Education, Confucianism, and the Spirit of Settlers ..................... 361
6.14 Some Conclusions .................................................................. 365
Appendix to Section 6.11: Colonial Linkages of SMEs ......................... 367
Acknowledgments .................................................................................. 367
References .............................................................................................. 368

Chapter 7. Economic and Cultural Backgrounds of the 228 Incident in Taiwan
— An Application of Social Expectation Theory ..................................... 375

7.1 Introduction ................................................................................ 375
7.2 Industrialization under the Japanese Regime ..................................... 376
7.3 Japanization Programs and Southward Advancement .......................... 380
7.4 Implications to the Post-war Period — The 2-28 Incident .................... 386
7.5 Estimation of Social Achievement and Expectations .......................... 392
7.6 Some Concluding Remarks ............................................................. 400
Acknowledgments .................................................................................. 403
References .............................................................................................. 403
Part III Early Postwar Economic Development 407

Chapter 8. Product Life-Cycle and Diffusion of Technology — The Taiwanese Case 409
8.1 Introduction 409
8.2 DFI and Product Life-Cycle Theory 410
8.3 DFI and Diffusion of Technology 414
8.4 Entry and Exit in the Television Industry 418
8.5 Rate of Diffusion of Television Production 418
8.6 Some Concluding Remarks 421
Acknowledgments 422
References 422

Chapter 9. Direct Foreign Investment, Technology Transfer, and Industrial Development — The Case of Electronics Industry in Taiwan 425
9.1 Overview of the DFI in Taiwan 425
9.2 The Effect of DFI on Taiwan’s GDP 429
9.3 DFI and Technology Transfer 432
9.4 Technology Transfer in the Television Industry 437
9.5 Conclusion 440
Acknowledgments 441
References 442

Chapter 10. Globalization of the Taiwanese Economy and U.S.-Taiwan Trade Relations 445
10.1 Introduction 445
10.2 The Taiwanese Trade Structure as an Indicator of Globalization 446
10.3 Other Indicators of Globalization 450
10.4 Impacts of Globalization and U.S.-Taiwan Trade Relations 453
10.5 The Taiwanese Exports in the U.S. Market 457
10.6 Some Thoughts on the U.S.-Taiwan Trade Adjustments 460
10.7 Conclusions 462
Acknowledgments ........................................... 463
References .................................................. 463

11.1 Introduction ............................................. 467
11.2 Transition Growth of the Three Countries .................. 468
11.3 Output and Trade Structures ............................ 472
11.4 Empirical Tests of Similarity ............................ 481
11.5 Some Concluding Remarks .............................. 495
Appendix 11A: Sources of Data ............................. 497
Appendix 11B: Some Technical Notes on the Econometric Methods ........................................... 497
Appendix 11C: Illustration of Table 11.1 and Table 11.2 ........ 498
Acknowledgments ........................................... 501
References .................................................. 502

Chapter 12. Economic Liberalization and Development — The Case of Lifting Martial Law in Taiwan 505
12.1 Introduction ............................................. 505
12.2 The Origin of the Authoritarian Regime in Taiwan ........ 506
12.3 Continuous Liberalization and Democratization .......... 510
12.4 Post-1987 Reform ....................................... 512
12.5 Quantitative Measurements of Freedom .................. 514
12.6 Some Previous Studies on the Impact of Liberalization ... 516
12.7 Tests of Stationarity with Structural Changes ............ 518
12.8 Tests of Structural Changes with Regression ............. 521
12.9 Tests of Smooth Transition ............................. 525
12.10 Some Concluding Remarks .............................. 526
Acknowledgments ........................................... 527
References .................................................. 528
Chapter 13. Diminishing Returns and Asian NIEs — How They Overcome the Iron Law

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.1</td>
<td>Introduction</td>
<td>533</td>
</tr>
<tr>
<td>13.2</td>
<td>On Diminishing Returns</td>
<td>537</td>
</tr>
<tr>
<td>13.3</td>
<td>Pacific Trade Triangle and Technology Transfer</td>
<td>547</td>
</tr>
<tr>
<td>13.4</td>
<td>Revealed Comparative Advantage</td>
<td>553</td>
</tr>
<tr>
<td>13.5</td>
<td>The Effects of Direct Foreign Investment</td>
<td>555</td>
</tr>
<tr>
<td>13.6</td>
<td>Coefficients of Learning</td>
<td>563</td>
</tr>
<tr>
<td>13.7</td>
<td>Concluding Remarks</td>
<td>569</td>
</tr>
</tbody>
</table>

Acknowledgments .......................... 574
References .................................. 574