

Contents

<i>Foreword</i>	xi
<i>Contributors</i>	xiii
<i>Acknowledgements</i>	xxiii
<i>Introduction</i>	xxv
PART ONE PPP POLICY	1
Chapter 1 Private Finance Initiative in Use <i>Ezekiel Chinyio and Rod Gameson</i>	3
1.1 Introduction	3
1.2 The Private Finance Initiative	4
1.3 UK Government's Influence on the Use of PFI	5
1.4 Private Sector Tasks in PFI	6
1.5 Establishing PFI Contracts	6
1.6 Forms of Finance Used in PFI	8
1.7 Performance of PFI Schemes – A Theoretical Perspective	10
1.8 Improving the Performance of PFI	14
1.9 Performance of PFI Schemes – An Empirical Review	14
1.10 A Generic Overview of PFI Schemes	19
1.11 Comparative Studies	20
1.12 Conclusion	20
Chapter 2 Using the Private Sector to Finance Capital Expenditure: The Financial Realities <i>Jean Shaoul</i>	27
2.1 Introduction	27
2.2 The Control of PFI	30
2.3 Post-implementation Evaluation of PFI	34
2.4 Conclusion	42
Chapter 3 Obstacles to Accountability in PFI Projects <i>Darinka Asenova and Matthias Beck</i>	47
3.1 Introduction	47
3.2 Finance Capital and Institutional Decision Making	51
3.3 Conclusion	61

vi Contents

Chapter 4	Refinancing and Profitability of UK PFI Projects <i>Steven Toms, Darinka Asenova and Matthias Beck</i>	64
4.1	Introduction	64
4.2	PFI Finance and Value for Money	65
4.3	Mechanisms and Policies of Refinancing	69
4.4	PFI Profits and Refinancing	72
4.5	Conclusion	77
Chapter 5	The Dedicated PPP Unit of the South African National Treasury <i>Philippe Burger</i>	82
5.1	Introduction	82
5.2	The Rationale for PPPs	83
5.3	The Rationale for a Dedicated PPP Unit	84
5.4	A Brief History of PPPs and the PPP Unit in South Africa	86
5.5	The Role of the South African Dedicated PPP Unit	90
5.6	Future Challenges	93
5.7	Conclusion	95
Chapter 6	PPP in Greenfield Airport Development: A Case Study of Cochin International Airport Limited <i>Thillai A. Rajan, Sheetal Sharad and Sidharth Sinha</i>	97
6.1	Introduction	97
6.2	Private Participation in New Airport Development	99
6.3	Indian Aviation Sector	103
6.4	The Cochin International Airport Project	105
6.5	Performance of CIAL	112
6.6	Summary and Lessons	117
Chapter 7	PPPs for Physical Infrastructure in Developing Countries <i>Akintola Akintoye</i>	123
7.1	Introduction	123
7.2	An Overview of Public-Private Partnerships	124
7.3	PPP: Developed Economies	125
7.4	PPP: Developing Economies	127
7.5	PPP: Analysis of Private Sector Participation	129
7.6	Discussion	138
7.7	Conclusions	141
Chapter 8	Team Building for PPPs <i>Mohan M. Kumaraswamy, Florence Y.Y. Ling and Aaron M. Anvuur</i>	145
8.1	Introduction	145
8.2	Integrating and Sustaining PPP Teams	147

8.3	Hong Kong Perspectives of PPP Teams	149
8.4	Singapore Perspectives of PPP Teams	153
8.5	Integrating PPP Project Teams	156
8.6	Selecting Project Consortium Teams	156
8.7	Concluding Observations	160
PART TWO PPP FINANCE		163
Chapter 9	PPP Infrastructure Investments: Critical Aspects and Prospects <i>Demos C. Angelides and Yiannis Xenidis</i>	165
9.1	Introduction	165
9.2	Critical Issues in Financing PPP Projects	167
9.3	Prospects for PPP Infrastructure Development	171
9.4	Conclusion	178
Chapter 10	Patterns of Financing PPP Projects <i>Sudong Ye</i>	181
10.1	Introduction	181
10.2	General Patterns of Financing PPP Projects	186
10.3	Choice of Financing Patterns	195
10.4	Summary	196
Chapter 11	PPP Financing in the USA <i>Arthur L. Smith</i>	198
11.1	Introduction	198
11.2	PPP Financing Models in the US	200
11.3	Case Studies	206
11.4	Conclusions	210
Chapter 12	Financial Modelling of PPP Projects <i>Ammar Kaka and Faisal Alsharif</i>	212
12.1	Introduction	212
12.2	Research in PPP Financial Modelling	213
12.3	Cost Models	214
12.4	Occupancy Cost	215
12.5	Cash Flow Models	217
12.6	PFI Financial Modelling in Practice	217
12.7	An Example of a PFI Financial Model for Schools	224
12.8	Conclusion	226
Chapter 13	Application of Real Options in PPP Infrastructure Projects: Opportunities and Challenges <i>Charles Y.J. Cheah and Michael J. Garvin</i>	229
13.1	Introduction	229
13.2	Infrastructure Project Flexibility as Real Options	231

viii Contents

13.3	Real Options Literature Related to Architecture, Engineering, Construction and Infrastructure Projects	234
13.4	Modelling Issues and Concerns	237
13.5	An Integrated Real Options–Risk Management Process for PPP Infrastructure Projects	244
13.6	Summary	245
Chapter 14	Financial Implications of Power Purchase Agreement Clauses in Revenue Stream of Independent Power Producers in Nepal <i>Raju B. Shrestha and Stephen Ogunlana</i>	250
14.1	Introduction	250
14.2	Financial Analysis	252
14.3	Analyses of Clauses	255
14.4	Summary	263
Chapter 15	Government Policy on PPP Financial Issues: Bid Compensation and Financial Renegotiation <i>S. Ping Ho</i>	267
15.1	Introduction	267
15.2	Game Theory	268
15.3	Is Bid Compensation Effective in PPP Tendering?	271
15.4	Financial Renegotiation and its Associated Problems	280
15.5	Financial Renegotiation Game and its Equilibrium	281
15.6	Propositions and Rules	289
15.7	Governing Principles and Policy Implications for Project Procurement and Management	292
15.8	Conclusion	299
PART THREE	PPP MANAGEMENT	301
Chapter 16	Innovation in PPP <i>David Eaton and Rifat Akbiyikli</i>	303
16.1	Introduction	303
16.2	Innovation and Competitive Advantage in PPP	304
16.3	Stimulants and Impediments to Innovation in PFI/PPP Projects	314
16.4	Innovation and Financial Issues in PFI/PPP Projects	319
16.5	Conclusion	324
Chapter 17	Combining Finance and Design Innovation to Develop Winning Proposals <i>Colin F. Duffield and Chris J. Clifton</i>	327
17.1	Introduction	327
17.2	The Drivers of PFI/PPP Projects in Different Jurisdictions	327

17.3	Design Innovation: The Issues	329
17.4	Financing Arrangements for PFI/PPP Projects	333
17.5	The Theory and Practice of Winning Proposals	342
Chapter 18	The Application of a Whole-Life Value Methodology to PPP/PFI Projects	346
	<i>John Kelly</i>	
18.1	Introduction	346
18.2	Projects	346
18.3	Client Value System	349
18.4	Whole-Life Costing	351
18.5	The Application of Whole-Life Value to the PPP/PFI Process	356
18.6	Discussion	360
Chapter 19	Best Value Procurement in Build Operate Transfer Projects: The Turkish Experience	363
	<i>Irem Dikmen, M. Talat Birgonul and Guzide Atasoy</i>	
19.1	Introduction	363
19.2	Bid Evaluation in BOT Projects	365
19.3	Case Studies	367
19.4	Best Value Procurement in BOT Projects	370
19.5	An Application of the Proposed Methodology	372
19.6	Concluding Remarks	376
Chapter 20	Application of Risk Analysis in Privately Financed Projects: The Value For Money Assessment through the Public Sector Comparator and Private Finance Alternative	379
	<i>Tony Merna and Douglas Lamb</i>	
20.1	Introduction	379
20.2	The PSC and the PFA	381
20.3	Conclusion	395
Chapter 21	Developing a Framework for Procurement Options Analysis	398
	<i>Darrin Grimsey and Mervyn K. Lewis</i>	
21.1	Introduction	398
21.2	What do PPPs Bring to Procurement?	398
21.3	Developing a Methodology	399
21.4	Conclusion	412
Chapter 22	The Payment Mechanism in Operational PFI Projects	414
	<i>Jon Scott and Herbert Robinson</i>	
22.1	Introduction	414
22.2	The Key Principles	414
22.3	Value for Money Arguments	415

x Contents

22.4	Key Components of the Payment Mechanism	416
22.5	The Output Specification	419
22.6	Performance Measurement System	421
22.7	Case Studies	424
22.8	Analysis and Discussion of Findings	429
22.9	Concluding Remarks	433
Chapter 23 Concession Period Determination for PPP Infrastructure Projects in Hong Kong <i>Xueqing Zhang</i>		436
23.1	Introduction	436
23.2	PPP Projects in Hong Kong	437
23.3	Build, Operate, Transfer Scheme	440
23.4	Concession Period	441
23.5	Concession Period Determination Methods	443
23.6	Simulation-Based Concession Period Determination Methodology	444
23.7	Simulation-Based Concession Period Determination Framework	446
23.8	Conclusions	454
	<i>Index</i>	457