

Handbook for Evaluating Infrastructure Regulatory Systems

**Ashley C. Brown, Jon Stern, and Bernard Tenenbaum
with Defne Gencer**



**THE WORLD BANK
Washington, D.C.**

Contents

Foreword	xi
Acknowledgments	xv
About the Authors	xvii
Abbreviations	xix
Executive Summary	1
What the Handbook Does	2
Quick Evaluation	3
Mid-Level Evaluation	3
In-Depth Evaluation	4
What Should Be Evaluated?	5
What Benchmarks?	6
Transitional Regulatory Systems	7
Chapter 1	
Evaluating the Effectiveness of Infrastructure Regulatory Systems: A Framework and Rationale	11
Why Evaluate Regulatory Effectiveness?	11
A Checkup	11
Expectations and Performance	12
Recommended Approach	15
What Should Be Evaluated?	15
The Meaning of Regulation	16
Regulatory Systems	17
Regulatory Entities	17
Quasi-Regulatory Systems and Failed States	18
Old-Style Versus New-Style Regulation	19

Two Important Dimensions of Regulation: Governance and Substance ..	19
Focus of This Handbook	21
The Structure of the Handbook	24
Chapter 2	
Approaches to Evaluating Regulatory Effectiveness.	29
Principal Methods of Evaluation	29
Type 1—Cross-Country Statistical Analyses.	29
Type 2—Cross-Country Descriptive Analyses.	31
Type 3—Single-Country Structured Case Studies.	33
The Approach of This Handbook and How It Differs from Earlier	
Approaches	37
Sector Outcomes and Regulatory Evaluations.	40
Quantitative Versus Qualitative?	41
The Recommended Approach	43
Two Limitations of the Recommended Approach.	44
The Limits of Regulation.	44
The Good, the Bad, and the Uncertain.	45
Bad Regulation	46
The Strategy of the Recommendations.	47
Chapter 3	
Benchmarks for Regulatory Governance: Key Principles and	
Critical Standards.	49
Why Benchmarks?	49
What Is an Independent Regulator?	50
Why Use an Independent Regulator as a Benchmark?	51
Are There Meta-Principles for Regulatory Governance?	54
Is the Independent Regulator Model Feasible in Countries with Limited	
Governance Capability?	57
Ten Key Principles for the Independent Regulator Model of	
Regulatory Governance.	59
1. Independence.	59
2. Accountability.	60
3. Transparency and Public Participation.	60
4. Predictability.	60
5. Clarity of Roles.	61

6. Completeness and Clarity in Rules	61
7. Proportionality.	61
8. Requisite Powers.	62
9. Appropriate Institutional Characteristics.	62
10. Integrity.	63
Critical Standards for Effective Infrastructure Regulation.	63
1. Legal Framework.	64
2. Legal Powers.	64
3. Property and Contract Rights.	65
4. Clarity of Roles in Regulation and Policy.	65
5. Clarity and Comprehensiveness of Regulatory Decisions.	66
6. Predictability and Flexibility.	66
7. Consumer Rights and Obligations.	66
8. Proportionality.	67
9. Regulatory Independence.	68
10. Financing of Regulatory Agencies.	69
11. Regulatory Accountability.	70
12. Regulatory Processes and Transparency.	71
13. Public Participation.	73
14. Appellate Review of Regulatory Decisions.	73
15. Ethics.	74
Chapter 4	
Transitional Regulatory Systems and Criteria for Evaluating Them . . .	77
Overview of Transitional Regulatory Systems.	78
Why Transitional Systems?.	78
Good Fits Versus Best Practice.	79
Types of Transitional Regulatory Systems.	79
The Danger of Transitional Regulatory Systems That Never Evolve. . . .	81
The Importance of Starting Conditions.	83
Governance.	83
Commitment and Capacity.	85
Commercialization.	88
Evaluation Criteria for Transitional Regulatory Systems.	92
Regulatory Options for Countries with Some Effective and	
Well-Functioning Government Institutions.	92
Some Prerequisites.	92

Utility Franchise and Concession Contracts, Private Investment, and the Development of Utility Regulation	93
Constraints on the Development of Effective Regulatory Institutions	95
Unwillingness or Inability to Move toward Commercialization	96
Unwillingness or Inability to Transfer Regulatory Decisionmaking Powers	98
Weak or Slowly Operating Law Courts and Regulatory Appeals	103
Uncertainty about the Nature and Strength of Regulatory Commitments	108
Limited Regulatory Capability	129
Popular Concerns That Consumer Interests Are Being Ignored Relative to Investors' Profitability	138
Macroeconomic Crises and Their Aftermath	141
Implications for the Evaluation of Regulatory Agencies	142
 Chapter 5	
How to Recognize Good and Bad Regulation: Regulatory Decisions and Sector Outcomes	145
Regulatory Decisions and Sector Outcomes	146
What Other Factors Affect Sector Outcomes?	147
Should the Evaluation Ignore External Factors beyond the Regulator's Control?	148
Judging the Quality of Utility Regulatory Frameworks and Decisions: Asking the Right Questions	149
Good and Bad Regulatory Decisions	151
What Is a Regulatory "Decision"?	151
The Meaning of "Good" and "Bad"	152
What Are the Goals?	152
What If the Evaluator Disagrees with the Government's Sectoral Goals?	153
How Can Good Decisions Be Distinguished from Bad Decisions?	153
Real-World Examples of Bad Regulatory Decisions	154
The Effect of Regulation on Sector Outcomes	156
Measures of Relevant Outcomes and Criteria for Infrastructure Industries	159
Indicators for Output and Consumption	160
Indicators for Efficiency	160
Indicators for Quality of Supply	161

Indicators for Financial Performance	161
Indicators for Capacity, Investment, and Maintenance.	162
Indicators for Prices.	162
Indicators for Competition.	163
Social Indicators.	164
Conclusion.	164

Chapter 6

The Process of Conducting a Regulatory Evaluation:

Discussion and Evaluation Tools. 165

The Three Levels of Evaluation	166
A Short Basic Evaluation	167
A Mid-Level Evaluation.	168
An In-Depth Evaluation.	169
The Questionnaires and Interviews.	170
The Alternative of Self-Completed Questionnaires.	171
Conducting the Evaluations.	173
Conducting Short Basic Evaluations.	173
Conducting Mid-Level Regulatory Evaluations.	175
Conducting In-Depth Evaluations.	179
Ensuring That the Evaluation Is Taken Seriously.	179
Conclusions and Implications for Regulatory Evaluation.	181

Appendix A Critical Standards for Effective Regulation of Infrastructure:

A Detailed Exposition.	185
--------------------------------	-----

Appendix B Background Documents for Mid-Level and

In-Depth Evaluations.	245
-------------------------------	-----

Appendix C Questionnaires for Short Basic Evaluations of Infrastructure

Regulatory Systems.	247
-----------------------------	-----

Appendix D Questionnaires for Mid-Level and In-Depth

Evaluations of Infrastructure Regulatory Systems.	265
---	-----

Appendix E Guidelines and Questions for Mid-Level and

In-Depth Evaluations of Infrastructure Regulatory Systems.	287
--	-----

Appendix F Sample Terms of Reference for Mid-Level and

In-Depth Evaluations of Regulatory Systems.	301
---	-----

Appendix G Summaries of Some Mid-Level and In-Depth

Country-Specific Regulatory Evaluations.	309
--	-----

Appendix H Alternative Regulatory Governance Models	335
Appendix I Infrastructure Regulation in Failed States and Post-Conflict Countries.	345
A Selected Annotated Bibliography.	353
Index.	379
 Boxes	
4.1: Transitional Regulatory Systems—Type 1.	80
4.2: Country Governance Measures.	84
4.3: Commercialization Criteria for Utility Service Industries and Enterprises.. . . .	91
4-4: The Stages of Regulatory Development.	94
4-5: Regulatory Appeals and Alternative Dispute Resolution—Underlying Legal Problems.	107
4.6: Contract Incompleteness.	114
4.7: Renegotiation Rates for Infrastructure Concession Contracts and Regulatory Arrangements.	116
4.8: The Use of a Regulator to Monitor and Enforce Concession Contracts— The Case of Jamaican Telecoms.	118
4.9: External Regulatory Risk Mitigation Methods and Partial Risk Guarantees.	123
4.10: The First Two PRGs.	125
 Figure	
2.1: Regulatory Actions and Decisions.	45
 Tables	
ES.1: Effective Regulatory Systems: Impediments and Possible Solutions	8
4.1: Commitment and Capacity Combinations.	85
4-2: Effective Regulatory Systems—Impediments and Possible Solutions.	143
5.1: Bad Decisions Arising from Regulatory Inaction: Sins of Omission	154
5.2: Bad Decisions Made in Regulation: Sins of Commission.	157
6.1: Summary of Recommended Evaluations.	167