

Innovation Management

Strategies, Concepts and Tools for Growth and Profit

Second Edition

Shlomo Maital
D. V. R. Seshadri



www.sagepublications.com
Los Angeles • London • New Delhi • Singapore • Washington DC

Contents

<i>List of Tables</i>	xv
<i>List of Figures</i>	xvii
<i>List of Abbreviations</i>	xix
<i>List of Examples and Mini Case Studies</i>	xxv
<i>List of Action-Learning Exercises</i>	xxxix
<i>Preface to the Second Edition</i>	xxxv
<i>Preface to the First Edition Ec, Tec, Exec</i>	xxxix
<i>Acknowledgements</i>	xli
<i>Prologue by Shlomo Maital and D.V.R. Seshadri</i>	xlvi

PART I STRATEGIES AND CONCEPTS FOR INNOVATION

1. The Innovation Imperative: <i>Why Innovate?</i>	3
1.1. Introduction	4
1.2. A Key Fallacy	5
1.3. Innovation to Energize	10
1.4. Innovate for Growth and Profit	17
1.5. Innovate for Survival	22
1.6. Summary and Conclusion	25
1.7. The Structure of This Book	25
Case Study 1.1: Tata Steel	26
2. The Innovation Portfolio: <i>What to Innovate?</i>	33
2.1. Introduction	33
2.2. Vision, Portfolios and Feelings	34
2.3. Vision, Strategy and Innovation	38
2.4. What Is the (Right) Question?	44
2.5. Identifying Feelings and Needs	46
2.6. Innovating Experiences, Battling Commoditization	50
2.7. Technology and Psychology	53
2.8. Innovation, Feelings, Needs: Creating Emotional Appeal	54
2.9. Searching for Innovation Opportunities: Find a Perfect Storm	57
2.10. Process Innovation	60

2.11.	Innovation Portfolios for Established Organizations	62
2.12.	Pioneers, Migrators, Settlers	64
2.13.	Conclusion	65
	Case Study 2.1: Ingersoll-Rand (India) Ltd.	65
3.	The Innovation Voices: <i>How</i> to Innovate?	70
3.1.	Introduction	70
3.2.	Thinking 'Inside the Box'	71
3.3.	The Four Voices	74
3.4.	Voice of the Product	75
3.5.	Profile Your Product for Profit and Growth	79
3.6.	Voice of the Customer	84
3.7.	Voice of the Organization	91
3.8.	Inspiration, Perspiration	98
3.9.	How to Foster Creativity in Organizations	100
3.10.	Listening to Your Inner Voice	102
3.11.	Integrating the Four Voices	104
3.12.	Conclusion	107
	Case Study 3.1: Tata Motors Ltd.	108
4.	The Innovative Mind: <i>Who</i> Innovates?	112
4.1.	Introduction	113
4.2.	Three Levels of Innovation	113
4.3.	The Individual Innovator	114
4.4.	Creativity Muscles	126
4.5.	Innovative Teams	132
4.6.	How to Build a Global Team	133
4.7.	The Innovative Organization	134
4.8.	Conclusion	136
	Case Study 4.1: Reinventing Project Management at Tata Steel	138
	Case Study 4.2: Indicorps: Harnessing the Power of Youth through Volunteerism by Creating a Meta-NGO	142

PART II TOOLS FOR PROFIT AND GROWTH

5.	Price-Cost-Value	149
5.1.	Introduction	149
5.2.	Do You Speak Ec?	150

5.3.	What Is a Business Model?	151
5.4.	Definitions	152
5.5.	Business Design as Ecosystem	160
5.6.	Systems Thinking	164
5.7.	Feedback Effects	165
5.8.	Technology, Meet Psychology	167
5.9.	Creating Value, Cutting Costs: Friends or Foes?	170
5.10.	The Power of Vision	174
5.11.	What Business Am I In?	176
5.12.	You Are Your Own Best Market Research	176
5.13.	Conclusion	177
	Case Study 5.1: Viewmax: Lucky Goldstar	178
	Case Study 5.2: Air Deccan: Revolutionizing the Indian Skies	181
6.	Hidden Costs, Hidden Benefits	186
6.1.	Missing: \$6.26 Billion	186
6.2.	Measure and Manage Costs	187
6.3.	Accounting versus Economic Costs	188
6.4.	Two Sets of Books?	188
6.5.	Definitions	189
6.6.	Reading the Numbers	191
6.7.	Risk-Adjusted Opportunity Cost of SE	192
6.8.	In Search of the Bottom-Bottom Line	193
6.9.	Excessively High Hurdle?	194
6.10.	Collect the Rent	197
6.11.	Other Hidden Costs	198
6.12.	Hidden Costs in America: \$1.3 Trillion ... or China's GDP!	200
6.13.	Depreciation—Economic or Accounting?	200
6.14.	Hidden Benefits	202
6.15.	Reconciling Growth and Cost-Cutting	203
6.16.	Good to Great: How Measurement Changes Management	204
6.17.	Sunk Costs	205
6.18.	Conclusion	207
	Case Study 6.1: Passenger Power Seat Adjuster	208
	Case Study 6.2: Comprehensive Trauma Consortium: Valuing Human Life	211
7.	Trade-Offs: Optimizing and Eliminating Them	216
7.1.	Introduction	217
7.2.	Efficiency and Effectiveness	221

7.3.	Value Innovation	223
7.4.	Defying Trade-Offs	226
7.5.	Personal Trade-Offs: Time, Goods	228
7.6.	The Big Trade-Off: Price Stability versus Full Employment	232
7.7.	Conjoint Analysis: Trade-Offs in Marketing	237
7.8.	Comparative Advantage	238
7.9.	Conclusion	239
	Case Study 7.1: Kodak's Trade-Off Dilemma	240
	Case Study 7.2: Tata Consultancy Services—Trade-Offs	246
8.	Cost Functions: 'Survival of the Fittest'	249
8.1.	Introduction	250
8.2.	Connections: From Malthus to Globalization	251
8.3.	Cost Functions	253
8.4.	The Case of the Data That Did Not Bark	254
8.5.	The Economics of Competitive Markets	261
8.6.	There Are No Fixed Costs	262
8.7.	Competition and Evolutionary Niches	266
8.8.	When Labour Costs Are Negligible	268
8.9.	Conclusion	269
	Case Study 8.1: The Innovation Programme at NEC, Nagano	270
	Case Study 8.2: Moser Baer—Survival of the Fittest	275
9.	People, Knowledge and Machines: In Search of a Free Lunch	278
9.1.	Introduction	278
9.2.	The Five Key Elements of a Business	279
9.3.	Toward a Revolution in HR Management	280
9.4.	Human Capital	283
9.5.	Adaptive Leadership	283
9.6.	Forgiveness? Or Permission?	286
9.7.	Finding Free Lunches: Finding New Ways to Measure and Manage Productivity	287
9.8.	The Origins of FLP	288
9.9.	FLP among Fortune 100 Companies: Key Ways to Find Free Lunches	290
9.10.	How Does FLP Differ from Existing Metrics?	291
9.11.	Conclusion	296
	Case Study 9.1: The Patriot Missile Story	297
	Case Study 9.2: Tata Steel's Merchant Mill Gets a Second Life	300

10. Scale and Scope: Scaling Markets of One	306
10.1. Introduction	307
10.2. How the West Grew Rich—And How the East Followed Suit	307
10.3. Network Economies	313
10.4. Measuring Economies of Scale and Scope	314
10.5. Using Cost Functions	317
10.6. Why Scale and Scope Are Enemies—And Fast Friends	319
10.7. Meet the Enemy: ‘Commoditization’	321
10.8. From Mass Production to Mass Customization	323
10.9. From Commoditization to Experiences: Two Case Studies	325
10.10. Platform Leadership	329
10.11. Two More Economies: Speed, Span	330
10.12. Conclusion	331
Case study 10.1: Cogentrix: Development Decisions for a Start-Up Company	332
Case Study 10.2: Reliance Industries—Economies of Scale?	335
Case Study 10.3: The Himalaya Drug Company—Economies of Scope	338
Case Study 10.4: Ruf & Tuf Jeans—‘Scaling Markets of One’	341
Case Study 10.5: Adarsh Builders—Mass Customization in the Housing Industry?	342
Case Study 10.6: Vishalla Restaurant—Creating an Experience?	343
11. Learning Curves Are Made, Not Born	347
11.1. Introduction	348
11.2. NVT—RIP. Rest in Peace. But Why? And How?	350
11.3. History of the Learning Curve Concept	354
11.4. ‘Tell the Truth’ as a Crucial Management Tool	356
11.5. The Role of Truth-Telling in Corporate Rescues: How Alan Mulally Rescued Ford	358
11.6. When Kindergarten Children Outperform MBAs: The Power of Trial and Error	359
11.7. Single-Loop and Double-Loop Thinking	360
11.8. Attacking Learning Curves	362
11.9. Learning Curves in Break-Even Analysis	367
11.10. Technology Leader versus Market Leader	370
11.11. Management Begins with Measurement	370
11.12. Prices versus Costs: And the Winner Is ...	371
11.13. Knowing and Doing	372
11.14. How Nature Learns—And Innovates: What We Can Learn	378
11.15. Conclusion: Building a Learning Organization	380
Case Study 11.1: Resource Allocation between Two Technologies	384
Case Study 11.2: Infosys Technologies: Migrating up the Value Chain	389

12. Where Is the Money? Markets and Demand-Driven Innovation	393
12.1. Introduction	394
12.2. Price–Cost–Value Revisited	395
12.3. Is Your Value Proposition Authentic?	398
12.4. Make Meaning—Not Money	400
12.5. Price Sensitivity: People Are Alike	401
12.6. Market Segmentation: People Are Similar	405
12.7. People Are Different: Create ‘Platforms’	407
12.8. Bandwagons and Snobs: People Buy What They See Others Buy—or See That Others <i>Don’t</i> Buy	409
12.9. What Women Want: How to Innovate for Half the World	413
12.10. Understanding ‘Profit Pools’: Where Is the Money? Where Will It Be in Three to Five Years?	415
12.11. The Upside-Down Profit Pool: From Frown to Smile	418
12.12. Conclusion	420
Case Study 12.1: Rate Reduction or Investing in a Future Network at NTT?	420
Case Study 12.2: HDFC Bank—Creating Customer Intimacy	423
13. Calculating Risks: Decision-Making in an Uncertain World	427
13.1. Introduction	428
13.2. Turning Uncertainty into Calculated Risks	429
13.3. Risk–Benefit Analysis	430
13.4. Visualizing Expected Value—Decision Trees	432
13.5. Scenario Analysis	434
13.6. Identifying Systemic Risk by Scenario Analysis	435
13.7. Measuring and Managing Risk and Risk Premiums	436
13.8. The Crucial Importance of the Risk Time-Profile	443
13.9. Financial Options and Real Options	445
13.10. Odd Behaviour towards Odds	448
13.11. Predictably Irrational	453
13.12. Bootstrapping	454
13.13. Conclusion	456
Case Study 13.1: Putting Your Money Where Your Stakeholders’ Heart Is	457
Case Study 13.2: Investment Strategy: A Case Study of Private Banking	464
Case Study 13.3: Sundram Fasteners Ltd.—Turning Uncertainty into Calculated Risks	466

14. Competing by Collaborating	471
14.1. Introduction	472
14.2. Adam Smith: Version 1776? Or Version 1759?	472
14.3. Globalization 4.0	474
14.4. Collaborating with Competitors	478
14.5. Game Theory: Collaborating with Competitors	479
14.6. The 2×2 Strategy Matrix	482
14.7. Collaborating with the Industry	488
14.8. Platform Leadership	491
14.9. Collaborating with Customers	495
14.10. Reading Customer Satisfaction	497
14.11. Collaborating with Colleagues	499
14.12. Conclusion: Hello, Stranger	501
Case Study 14.1: The US Postal Service, Strategic Alliance	502
Case Study 14.2: i-flex Solutions—Collaborating with the Industry	506
<i>Epilogue: Ten Essential Tools</i>	510
<i>Index</i>	514
<i>About the Authors</i>	524