

Index

- Aaker, D.A., 40
- ABC (activity-based costing), 32, 118, 121, 141, 150, 375
- Abela, A.V., 39–52
- Abernathy, W.J., 65, 73
- Abma, T., 415–16, 428
- ABR (activity-based revenue), 8, 118, 121–3
- accountability. *See* responsibility and accountability
- accounting
- financial performance and (*See* financial performance measures)
 - police force performance measurement as form of, 372–3
 - truth in context of, 142
- activity-based costing (ABC), 32, 118, 121, 141, 150, 375
- activity-based revenue (ABR), 8, 118, 121–3
- activity-centric performance measurement, 118, 119, 121–4
- Adams, Chris, xiii, 143
- adaptive planning model, 141–2, 163–4
- beyond budgeting and, 141–2, 174–8
 - complex systems theory, 164–5
 - continuous planning cycles, management through, 167–9
 - coordination of actions across subunits, 173–4
 - front-line teams, planning/strategy/decision making devolved to, 165–7
 - KPI (key performance indicator) reporting, 170–1, 177
 - resource management, 171–3
 - rolling forecast, 169–70, 172
 - “sense and respond” management, shift from “make and sell” paradigm to, 163–4
 - teams, focus of accountability on, 174–8
- Adorno, T.W., 203
- agency theory, 350
- Agle, B., 223
- Ahrens, Thomas, xiii, 428, 432, 477
- Ailawadi, K.L., 53
- airline delay tracking and assignment systems, anomalies in. *See under* anomalies in measurement systems
- ambiguity and uncertainty. *See also* loose coupling
- in performance measurement systems
 - anomalous high performance and, 468–73
 - intrinsic motivation, situations requiring, 440–1, 442
 - in knowledge work measurement, 290
 - in measurement itself, 455
 - in public sector performance measurement, 415–16, 426
 - in specification of performance criteria, 452
- Ambler, Tim, xiii, 39–52, 237, 239
- American Customer Satisfaction Index, 48
- American Express, 172
- American Marketing Association (AMA), 36, 242
- Anderson, B., 65
- Anderson, E.W., 39–52
- Anderson, P., 307
- anomalies in measurement systems, 431, 449.
- See also* loose coupling in performance measurement systems
- airline industry case studies showing anomalous high performance, 458–68
- accepting responsibility for delay, leading to less accurate measurement, 465–6
 - delays, tracking and assigning, 458–9
 - perversity and dysfunction in measurement systems, 459–61
 - reward and performance, no clear link between, 466–8
 - “team delay” category leading to less accurate measurement, 463–5
 - vagueness regarding performance criteria, 461–3
- ambiguity model of performance measurement derived from, 468–73
- basic principles of BPM and, 450–8
- accurate measurement of performance, 453–5, 463–5, 465–6

- clear specification of performance criteria, 450–3, 461–3
- compliance-based model of performance measurement derived from, 470
- reward and performance, clear link between, 455–7, 466–8
- high-commitment model of organizations and, 473
- public sector perversities and dysfunctions, 427–8
- applied mathematics theory of measurement.
See measurement theory
- Argyris, Chris, 73
- Armstrong, M., 343
- Arora, A., 307
- assets
- financial performance measurement and, 13, 18
 - marketing performance measurement and, 45–7, 56
- attributability in observation of knowledge work, 287, 288, 289
- Austin, Rob, xiii, 237, 279, 294, 427–8, 431, 440, 449
- axiology, 227
- axiomatic or representational measurement theory, 225–6
- Bacal, R., 342, 343
- Baird, L., 127
- Baker, G.P., 451, 452, 462
- balanced scorecard approach, 147–9
- financial performance measurement, 23, 27–8, 32, 34
 - institutional/external coherence, lack of, 207
 - key characteristics, 149, 150
 - loose coupling of metric and operational response, 481
 - marketing performance measurement, 37, 48
 - multiple task problem situations, need for intrinsic motivation in, 441
 - operations management, 74
 - shortcomings of, 148
 - strengths and weaknesses, 141
 - widespread adoption of, 143
- Baldrige, Malcolm, and Baldrige Award, 1, 70, 149
- Baldry, C., 354
- Ballantine, J., 150
- Banker, R.B., 283
- Barnard, C.L., 291
- Barwise, P., 47
- Basel Committee on Banking Supervision, 271
- basic principles of BPM, 450–8
- accurate measurement of performance, 453–5, 463–5, 465–6
 - clear specification of performance criteria, 450–3, 461–3
 - compliance-based model of performance measurement derived from, 470
 - reward and performance, clear link between, 455–7
- BB (beyond budgeting) movement, 30, 34, 141–2, 174–8
- Bebchuk, I., 276
- behavioural psychology. *See* psychology
- benchmarking
- BPM frameworks working with, 150
 - marketing dashboards, 256
 - operations management, 74
 - performance prism and, 155
 - value of performance measurement and, 218
- Bernardin, H., 354
- Best Factories Award, 75
- beyond budgeting (BB) movement, 30, 34, 141–2, 174–8
- Bicheno, J., 66
- Binmore, K., 296
- bio power, 371, 375
- biotechnology R&D collaboration and innovation performance. *See under* innovation performance measurement
- Bird, Sheila, 409, 410, 411, 412, 413, 423
- Bititci, U.S., 150
- Blau, P.M., 283–5
- Bonoma, T.V., 37
- Bouckaert, G., 408
- boundaries
- of health care systems, 391
 - of object to be measured, 223
- Bourguignon, C., 127
- Boyle, D., 426
- Boyne, G.A., 409
- BPM. *See* business performance measurement
- Bradach, J.L., 478
- brand equity, 253
- brand valuation, 240, 245, 247
- branding, 46–7, 56
- Brignall, S., 150
- Brignell, J., 426
- British Airways, 171
- Brown, Andrew, xiii, 237, 339
- Brown, M.G., 146
- budgetary control, 29–31, 34
- Buffett, Warren, 177
- Burgman, R., 222
- business or management processes. *See* processes business performance measurement (BPM), 1.
See also more specific topics, e.g. marketing performance measurement

- business performance measurement (BPM), (cont.)
- activity-centric, 118, 119, 121–4
 - basic principles of, 450–8
 - causal model of performance, 127–31
 - decision making and performance, 131–2
 - defining, 8, 117–18, 125, 137–8
 - dissatisfaction with current performance measures, 113–14
 - emergent issues and trends, 4
 - firm-centric, 116–21
 - functional perspectives, 4, 7–9
 - future research directions, 431–2
 - indicators vs. measures, 128, 219, 220, 222
 - manageable nature of performance, 136–7
 - as management discipline, 8
 - measurement and performance, relationship between, 134–5
 - measurement, defining, 224–32
(*See also* measurement theory)
 - organization, performance defined from inside or outside, 132–3
 - performance, defining, 117–18, 125–7
 - practical applications and challenges, 4, 237–8
 - problems of measurement systems per se, 115–16
 - public services, 4
 - reasons for employing, 160, 221 (*See also under* public sector performance measurement)
 - relativity of concept of performance, 135–6
 - requirements for optimal performance measures, 114–15
 - responsibility issues, 133
 - of subunits, 133
 - timescale of projects, 160
- business process redesign/re-engineering, 151, 154
- Buzzell, R.D., 39
- Cameron, J., 438, 439
- Camp, Robert, 74
- Campanella, J., 70
- Canada
- performance prism framework used in private sector Canadian firm, 159
 - regional health care systems, use of composite indicators in, 397–8
- capabilities
- accuracy of measurement and assessment of, 454
 - in performance prism framework, 155
 - public sector competences, identifying, 410–11, 419, 424
 - TASK (talent, skill and knowledge) differentials in, 238, 280–1, 295–8, 299
- capital, 15, 18–22
- capital asset pricing model (CAPM), 20–1
- Carpenter, M., 308
- cash flow
- branding and, 46
 - as financial performance measurement, 13, 15, 17, 18
 - marketing dashboards, DCF (discounted cash flow) metrics and, 240, 241
 - as marketing performance measurement, 44, 46
 - risk in BPM, 266
- Caswell, D.L., 453
- CATWOE, 418
- causality
- ex post* causal ambiguity in observation of knowledge work, 290
 - performance, causal model of, 127–31
 - results–determinants framework, 146
- cave analogy (Plato), 129
- CbM. *See* context-based measurement
- Chandler, Alfred, 73
- Chapman, Chris, xiii, 428, 432, 477
- Chartered Institute of Marketing, 36
- Checkland, P.B., 418
- Christensen, C.M., 307
- Church, W. Hamilton, 144
- Chussil, M.J., 39
- citizen focus and police force performance measurement, 369, 376
- Clark, Bruce H., xiii, 8, 36, 37, 39–52
- Clark, Graham, xiii, 238, 318
- CLV (customer lifetime value), 240, 245, 247
- CMO Council, 36
- Coca-Cola, 177
- Cockburn, I., 308
- Codman and Shurtleff, 292, 293
- cognitive evaluation theory, 437
- Cohen, M., 452
- coherence theory, 192–3
- communication and social coherence, 194–6
 - company coherence, 204–5
 - external coherence, 204
 - institutional coherence, 205–8
 - internal coherence, 200–4
 - pragmatic coherence, 198
 - value coherence, 193–4
- collaboration and innovation performance. *See under* innovation performance measurement
- Collier, Paul, 9, 237, 363, 365
- Collins, J.C., 243, 262, 272
- communication
- of primary teacher professional development needs, 348
 - social coherence and, 194–6
 - theoretical foundations of BPM, 172, 183–4

- companies. *See* organizations
- comparative performance information. *See* cross-organizational measurement
- competences. *See* capabilities
- competition
- balanced scorecard's failure to address, 148
 - market-oriented health care systems, 383
 - results–determinants framework, 146, 148
 - stakeholder approach of performance prism, 151, 155
- complex systems theory, 164–5, 295
- complex tasks and pay for performance schemes, 434
- compliance-based model of performance measurement, 470
- composite indicators. *See* health care systems, use of composite indicators in
- Compstat model of police force performance measurement, 367
- Contandriopoulos, D., 411
- context
- importance of, 319
 - insensitivity to context in observation of knowledge work, 289
 - multiple context dimensions of performance measurement systems, 478–80, 488, 489
- context-based measurement (CbM), 238, 318, 333–4
- association of terms, 328, 329
 - automotive industry case study, 322–3
 - changing coding in, 332–3
 - construction process, 326–30
 - dimensions and terms, determining, 326
 - grammar
 - defined and described, 323
 - designing, 327
 - importance of context for measures, 319
 - language-based approach defined and described, 323–6
 - lexicon
 - classifying and factoring, 324, 327
 - defined and described, 323
 - recording measures, 328–30
 - results, determining, 330–3
 - statements, building and entering, 328, 330
 - structured framework for measuring, use of, 319–21
 - WBS (work breakdown structure), 319–21
- contingency approach, 481
- control issues
- cybernetics, 413–15, 426
 - financial performance of managers (*See under* financial performance measures)
 - health care systems, use of composite indicators in, 390–3
 - in primary school teacher performance, 345–6
 - in public sector performance measurement, 413–16, 419, 421, 426
 - SCM (supply chain management) and control of operations, 90
- Cooper, R., 71
- Cooperative Bank, 2
- Corcoran, F.J., 70
- corporate culture, 91
- corporations. *See* organizations
- correspondence theory, 188–9
- Corvellec, H., 127
- cost centre, operations viewed as, 65–6
- “creative accounting”, 16–17
- creative work, intrinsic motivation required for, 440
- CRM (customer relationship management), 49–50, 87, 102–3
- Crosby, P.B., 67
- cross-organizational measurement
- external coherence of BPM systems, 204
 - in health care systems, 204
 - in operations management, 74–5
 - in SCM (supply chain management), 107–9
- crowding out theory of motivation, 436–7, 457
- empirical evidence of, 438–40
 - theoretical bases for, 437–8
- culture, corporate, 91
- Curtis, B., 296
- customer base
- business process redesign/re-engineering and, 154
 - CRM (customer relationship management), 49–50, 87, 102–3
 - in human activity systems, 418
 - loyalty of, 48–9
 - marketing and (*See under* marketing performance measurement)
 - performance prism and, 152
 - primary school teachers, measuring performance of, 354
 - public accountability of public sector systems, 411–13
 - ROC (return on customer), 240, 241, 251–3, 258
 - satisfaction levels, 47–8
 - SCM and (*See under* supply chain management)
- customer equity, 240, 245, 247, 251, 252
- customer lifetime value (CLV), 240, 245, 247
- customization of product and loose coupling in performance measurement systems, 479, 487–90
- cybernetics, 413–15, 426

- Dag, Tom, 465–6
- Dale, B.G., 70
- Darwinian view of systems, 164
- data envelopment analysis, 39, 67
- Datar, S.M., 283
- Davila, A., 454, 465
- Dawes, R., 226
- Dawes, R.M., 468
- Day, G.S., 39–52
- DCF. *See* discounted cash flow (DCF) metrics
- DeChernatony, L., 47
- Deci, E.L., 435, 436, 438
- decision making
 - in adaptive organizations, 165–7
 - relationship to performance, 131–2
- defining BPM, 8, 117–18, 125, 137–8
- demand management, 88
- Deming, W. Edwards, 67, 168, 409, 455
- Dempster, N., 339
- Denis, J.-L., 411
- Denning, Tom, Lord Justice, 364
- Derwa, Tom, 466–8
- Descarpentries, Jean-Marie, 175
- DHL UK, 156–8
- Diageo, 245
- differential capabilities, 238, 280–1, 295–8
- dimensionalization of measurement, 191, 199–200, 212
- discipline and police force performance
 - measurement, 370–1, 372, 374–5, 376–9
- discounted cash flow (DCF) metrics, 240
 - ROC (return on customer) and, 251–3
 - ROI (return on investment) and, 248
 - suitability of, 240, 241
- dividends, 20
- Drucker, Peter, 73, 74, 342
- DuPont's pyramid of financial ratios, 14–17, 144
- Dutta, S., 309, 313
- dysfunction. *See* entries at perversity and dysfunction
- earned value measurement (EVM), 320
- earnings per share (EPS), 19
- economic agency theory of reward and performance, 455
- economic order quality (EOQ) model, 67, 70
- economic profit models used to account for risk
 - in BPM, 266, 273, 274
- economic value added (EVA[®])
 - financial performance measurement and, 11, 25–6, 28, 32, 33
 - rise in use of, 114
 - risk in BPM, 266, 273
 - SCM (supply chain management) and, 102, 103, 104, 106–7
- education, BPM in. *See* primary school teachers, measuring performance of
- EFQM. *See* European Foundation for Quality Management
- Eisenberger, R., 438, 439
- electronic point of sale (EPOS) systems, 76
- emergent issues and trends, 4
- engineering disciplines, use of measurement in, 319, 453
- Enron, 179
- enterprise resource management (ERM)
 - applications, 319
- enterprise resource planning (ERP) systems, 76
- environmental factors
 - health care systems, use of composite indicators in, 390–3
 - in human activity systems, 419
 - in primary school teacher performance, 345–6
- EOQ (economic order quality) model, 67, 70
- epistemic platform and theoretical foundations of BPM, 189–91
 - data, truth of vs. belief in, 208–12
 - levels of, 201
 - modelling and dimensionalizing, 199–200, 212
- EPOS (electronic point of sale) systems, 76
- EPS (earnings per share), 19
- ERM (enterprise resource management)
 - applications, 319
- ERP (enterprise resource planning) systems, 76
- Eudoxus of Cnidus, 225
- European Foundation for Quality Management (EFQM)
 - award, 1, 70
 - Business Excellence Model, 149, 150
 - financial management performance measurement scheme, 27, 32
- Euske, Ken, xiv, 8, 125
- EVA[®]. *See* economic value added
- evaluability in observation of knowledge work, 288, 289
- EVM (earned value measurement), 320
- evolutionary view of systems, 164
- ex post* causal ambiguity in observation of knowledge work, 290
- external financial reporting, 18–22
- “face” and risk appetite, 264
- fact. *See under* theoretical foundations of BPM
- factor analysis (FA), 388
- Fahey, L., 39–52
- fairness, perception of, 438, 444
- Feder, R.A., 39

- feedback loops
- closed-loop feedback systems, 453
 - cybernetics, 413–15
 - marketing performance measurement, 54
 - PDCA (plan–do–check–act) cycle, 168, 326, 409
 - 360-degree feedback, 353
- Fiegenbaum, A.V., 67
- Fielding, Michael, 354
- financial performance measures, 7, 11–35
- advantages and disadvantages, 31–3
 - assets, 13, 18
 - budgetary control, 29–31, 34
 - capital, 15, 18–22
 - cash flow, 13, 15, 17, 18
 - connections between approaches to, 28–31
 - “creative accounting”, 16–17
 - definition of accounting, 32
 - external financial reporting and shareholder return on investment, 18–22
 - loose coupling of metric and operational response, 481
 - as mainstay of quantitative approaches to BPM, 11
 - as major objective of business, 18–22
 - managerial motivation and control via, 22–8
 - accounting-based techniques, 22, 23–7
 - balanced scorecard approach, 23, 27–8, 32, 34
 - budgetary control, 29
 - EVA[®], 11, 25–6, 28, 32, 33
 - investment centres, 23
 - non-accounting performance drivers, 22, 27–8
 - residual income, 25
 - responsibility centres, 23
 - revenue centres, 23
 - transfer price, 24
 - non-financial measures vs., 11, 32
 - profitability, 13, 15, 17, 18, 19
 - ratios, pyramid of, 14–17, 144
 - relative vs. fixed targets, 31
 - research challenges in, 33–5
 - ROI, 12, 18–22
 - strategy mapping, 34
 - as tool of financial management, 12–18
- firm-centric performance measurement, problem of, 116–21
- firms. *See* organizations
- Fisher, I., 210–11
- Fitzgerald, L., 146, 148, 150
- Flaste, R., 436
- Fletcher, A., 222
- Fletcher, C., 354
- Ford, Henry, 66
- forecasting process, 169–70, 172
- Fornell, C., 40
- Foucault, Michel, 363, 369–72, 373, 376
- Fox, A., 350
- frameworks and methodologies, 4, 141–2. *See also* specific types, e.g. balanced scorecard approach
- CbM, 319–21
- innovation performance measurement, 306–8
- integrated learning theory of (*See* integrated learning theory of truth)
- key characteristics, 149–51
- managerial buy-in, 160
- measurement theory of (*See* measurement theory)
- non-core elements, 150
- operations management’s need for, 72–4
- reasons for adopting, 160, 221
- review of, 143–4, 144–9
- SCM (supply chain management)
 - GSCF conceptual framework, 84–5
 - metrics, framework for developing, 100–9
 - timescale of projects, 160
- Fraser, Robin, 141
- Freeman, R.E., 151
- Frey, Bruno, xiv, 431, 433, 457
- Fried, J., 276
- functional perspectives on BPM, 4, 7–9
- funding
 - of health care systems, 391
 - police force performance measurement and, 375
 - primary school teacher professional development and performance measurement, 349
- future discounted cash flow (DCF) metrics, 240
 - ROC (return on customer) and, 251–3
 - ROI (return on investment) and, 248
 - suitability of, 240, 241
- Gambardella, A., 307
- gaming, 423, 424
- Garvin, D., 221
- GE Measurement Project, 144
- GEC/AEI merger, 179
- General Electric Company, 27, 271, 272
- Geroski, P.A., 272
- Gerwin, D., 72
- Gibbons, R., 435, 451, 452, 462
- Gillette, 177
- Gittell, Jodi Hoffer, xiv, 294, 427–8, 431, 449
- Gleeson, D., 340
- Global Manufacturing Research Group, 75

- Global Supply Chain Forum (GSCF), 82, 84–5, 109
- goal-setting theory and measurement of teacher performance. *See under* primary school teachers, measuring performance of
- Goddard, Maria, xiv, 237, 383
- Goldstein, H., 347
- Gooner, R., 39
- Gouldner, A., 452
- governmentality and police force performance measurement, 371–2, 375–6, 376–9
- Grady, R.B., 453
- Gray, D., 222
- Greene, D., 436
- grounded theory, 189, 190, 191, 192, 199–200, 212
- Groupe Bull, 175, 176
- Gruca, T.S., 40
- GSCF (Global Supply Chain Forum), 82, 84–5, 109
- Habermas, J., 194
- Hackman, R., 473
- Hall, R.W., 67
- Hall, V.C., 438
- Hammer, Michael, 154
- Handelsbanken, 167, 171, 173, 176–7, 178
- Harris, F., 47
- Hayes, R.H., 65, 73
- health care service in UK. *See under* United Kingdom
- health care systems, use of composite indicators in, 237, 383–4, 404
- advantages and disadvantages, 384–5
- boundaries of system, 391
- collinearity of variables, 388
- combining variables, 389–90
- decision rules, using, 390
- definition of composite indicator, 383
- efficiency of resource management, 393
- environmental or uncontrollable factors, adjusting for, 390–3
- funding of system, 391
- international case studies, 394–403
- Canadian regional health care, 397–8
- UK NHS (National Health Service), 398–9, 401–2
- US Medicare and Medicaid, 394–7, 402–3
- WHO (World Health Organization), 399, 401
- multidimensionality, need to deal with, 383
- organizational objectives, choosing, 386
- policy implications, 404
- preferences, eliciting, 389–90
- process vs. outcome measures, 387
- risk adjustments, 392
- sensitivity analysis, 393
- specific indicators or variables, choosing, 386–8
- steps for developing, 385–6
- transformation or standardization of chosen variables on commons scale, 388–9
- units to be assessed, choosing, 386
- value measurement, 389–90
- weighting variables, 389–90
- heat charts, 270
- Hedberg, B., 481
- Heller, J.F., 436
- Helmholtz, H., 225
- Henard, D.H., 48
- Henderson, R., 308
- “heroic” model of performance measurement, 468–73
- hierarchy of effects, 43
- high-commitment model of organizations, 473
- high performance with poor performance measurement systems. *See* anomalies in measurement systems; loose coupling in performance measurement systems
- highly skilled workers
- creative work, intrinsic motivation required for, 440
- knowledge workers (*See* knowledge work measurement)
- in public sector performance measurement, 415–16
- teachers (*See* primary school teachers, measuring performance of)
- Hofstede, G., 238, 413–15, 416, 426
- Holmström, B., 281, 285, 290, 291, 293
- Hood, C., 413
- Hope, Jeremy, xiv, 141–2, 163
- Hoyer, W.D., 39
- Huff, F., 426
- human activity systems, 418–19, 420
- Husbands, C., 340
- ICs (interactive control systems), 292–3
- IMA (Institute of Management Accountants), 113
- Imai, M., 67
- incomplete contracts
- intrinsic motivation and pay for performance, 433, 441, 442
- in knowledge work (*See* knowledge work measurement)
- indicators
- composite (*See* health care systems, use of composite indicators in)
- leading, 136
- measures vs., 128, 219, 220, 222
- individual reward incentives and risk, 275–7

- industrially radical innovation, 304
- information asymmetry in observation of knowledge work, 285–90
- information availability in using pupil progress as measure of teacher performance, 347–8
- information flow structure, 91
- information systems, “semi-confusing”, 481
- informational measurement, 297–8
- innovation performance measurement, 238, 304–5
- biotechnology R&D collaboration sample study, 310–16
 - analysis of patent-based measures, 313–15
 - hypotheses of, 310–11
 - Poisson regression analysis, use of, 312, 313
 - results of, 312, 313
 - testing methodology, 311–12
 - categories of radicality, 304–5, 315
 - frameworks and methodologies, 306–8
 - importance of studying, 305–6
 - industrially radical innovation, 304
 - managerial implications of, 316
 - organizationally radical innovation, 304
 - patent citation analysis, 238, 304, 315
 - advantages of, 307
 - in biotechnology sample study, 313–15
 - citation weighting, 308–9
 - limitations of, 308
 - technologically radical innovation, 305
 - user-radical innovation, 304
- inseparability in observation of knowledge work, 289
- Institute of Management Accountants (IMA), 113
- institutional coherence of BPM systems, 205–8
- integrated learning theory of truth, 196–7
- company coherence, 204–5
 - data, belief in vs. truth of, 208–12
 - designing valid system from perspective of, 198
 - epistemic platform, modelling and dimensionalizing, 199–200, 201, 212
 - external coherence, 204
 - grounding in reality and life world of performance unit, 198–9
 - institutional coherence, 205–8
 - internal coherence, 200–4
 - proactive truth, real truth, and learning, 212–14
 - purpose and objectives of BPM systems, pragmatic coherence to, 198
- integration, 184, 196–7
- interactive control systems (ICSs), 292–3
- International Manufacturing Strategy Survey, 75
- intrinsic motivation. *See under* pay for performance and motivation
- inventory turns, 92–5
- investment centres, 23
- iQuanta system and police force performance measurement, 367, 374, 380
- Ittner, C., 481
- Jacobs, Rowena, xiv, 237, 383
- Jacobson, R., 40
- Japan’s emergence as economic power, 67
- Jatur, S., 222
- Jencks, S.F., 394
- Jensen, M.C., 76, 275, 451
- JIT (just-in-time), 65, 71
- Johnson and Johnson, 243, 292, 293
- Johnson, H.T., 71, 129
- Jönsson, S., 481
- Juran, Joseph M., 67
- just-in-time (JIT), 65, 71
- kaizen, 67, 69
- Kaplan, R.S., 71, 73, 350. *See also* balanced scorecard approach
- Katila, Riitta, xiv, 238, 304
- Kay, J., 272
- Keegan, D.P., 145, 149
- Kelleher, Herb, 174
- Kelvin, Lord, 134, 203
- Kennerly, Mike, xiv, 141, 143
- Kettl, D.F., 339
- key performance indicators (KPIs), 170–1, 177
- key result indicators (KRIs), 170
- King, Lord, 171
- Knemeyer, Michael, xiv, 8, 82
- knowledge and power, police force performance measurement as, 363, 369–72, 379–80
- knowledge work measurement, 237, 279–81
- attributability, 287, 288, 289
 - context insensitivity, 289
 - evaluability, 288, 289
 - ex post* causal ambiguity, 290
 - future research challenges, 298–9
 - informational measurement, 297–8
 - inseparability, 289
 - measurability, 287, 288, 289
 - motivation, 280, 290–4
 - motivational measurement, 297–8
 - observability, 279–81, 281–90 (*See also* observability and BPM)
 - pay for performance, 434
 - practical implications of, 300
 - reliability, 289
 - TASK (talent, skill and knowledge) differentials, 238, 280–1, 295–8, 299
 - use of term, 279
- Koestner, R., 438

- Kogut, B., 481
 Kohn, A., 436
 Kortum, S., 308
 KPIs (key performance indicators), 170–1, 177
 Krafft, M., 39
 Krantz, D., 225
 KRIs (key result indicators), 170
 Kudlow, Larry, 251
- Lambert, Douglas, xiv, 8, 82
 Land Securities plc, 273
 Lane, P., 316
 Lane, R.E., 436
 Langley, A., 411
 language-based approach of CbM, 323–6.
 See also context-based measurement
 Larkey, Pat, xiv, 237, 279
 Latham, Gary, 76, 342, 344, 345, 347, 357
 law enforcement. *See* police force performance measurement
 Lawler, E.E., III, 440, 444
 laws and regulations
 risk management, 262
 stakeholders, legal and regulatory communities as, 152
 Lazear, E.P., 442
 leading indicators, 136
 league tables, 424–5
 learning approach to validity and truth, 196–7.
 See also integrated learning theory of truth
 learning environments, BPM in. *See* primary school teachers, measuring performance of
 learning, performance measurement as supporting, 421
 Leasco–Pergammon affair, 179
 Leavitt, B., 291
 Lebas, Michel, xiv, 8, 125
 lender ratings used to calculate risk in BPM, 268–9
 Lepper, M.R., 436
 Lerner, J., 307
 Likert scale, 226
 Likierman, Andrew, xv, 237, 261
 Linstone, H., 224
 local customization of product and loose coupling in performance measurement systems, 479, 487–90
 Locke, Edwin, 76, 344, 345, 357
 logic and theoretical foundations of BPM, 182, 192–3
 loose coupling in performance measurement systems, 432, 477
 defined, 478
 local customization of product, 479, 487–90
 multiple context dimensions of measurement systems and, 478–80, 488, 489
 operational responses and performance metrics, 478–9
 in research literature, 480–2
 restaurant chain case study, 482–3
 differing managerial views of company, 488, 489
 failed performance measurement reforms in, 483–4, 489
 food margin reporting system, 485–7
 organizational structure, 483
 loyalty of customers, 48–9
 Lubatkin, M., 316
- MacNeal, K., 179
 Macro Process Model, 146, 147
 Magretta, Joan, 277
 “make and sell” paradigm, shift to “sense and respond” management from, 163–4
 Malcolm Baldrige National Quality Award, 1, 70, 149
 management
 adaptive planning (*See* adaptive planning model)
 BPM as disciple of, 8
 financial performance as means of motivating and controlling (*See under* financial performance measures)
 innovation performance measurement, implications of, 316
 performance amenable to, 136–7
 police force shift from measurement to, 376
 support for BPM projects, 160
 management by objectives, 342
 management or business processes. *See* processes
 manufacturing flow management, 88
 Manufacturing Future Survey, 75
 manufacturing, generally. *See* operations management
 March, J.G., 291, 452, 456
 market share, 44
 market value, concept of, 210–11
 marketing accountability, 242
 marketing dashboards, 237, 239–41, 257
 changing metrics, 245
 DCF metrics (*See* discounted cash flow (DCF) metrics)
 definition of marketing for purposes of, 239
 future research in, 256–7
 how many and which metrics to include, 243–5, 253–6
 importance of performance evaluation in marketing, 241–2
 multidimensionality, importance of, 240, 242–4

- planning and performance evaluation metrics
 - differentiated, 253–6, 257
 - practical application of, 256–7
 - ROC (return on customer), 240, 241, 251–3, 258
 - ROI (return on investment), 241, 248–51
- marketing, defined, 37–8, 239
- Marketing Leadership Council, 36
- Marketing Metrics Project, 36
- marketing performance measurement, 8, 36–7, 55–7
 - awareness of product, 42
 - balanced scorecard, 37, 48
 - branding, 46–7, 56, 240
 - cash flow, 44, 46 (*See also* discounted cash flow (DCF) metrics in marketing)
 - chain of effects in, 40–1
 - customer base, 47–50, 56
 - CRM (customer relationship management), 49–50
 - customer loyalty, 48–9
 - customer satisfaction, 47–8
 - ROC (return on customer), 240, 241, 251–3, 258
 - dashboards (*See* marketing dashboards)
 - defining marketing, 37–8
 - developing effective systems for, 51–2
 - feedback loops, 54
 - final outcomes, 43–5, 56
 - importance of, 241–2
 - intermediate outcomes, 42–3, 56
 - long-term vs. short-term measurements, 55
 - market capitalization of firm, 45
 - market share, 44
 - marketing activities (marketing mix), 41–2, 55
 - marketing assets, 45–7, 56
 - multidimensional schemes, 37
 - marketing dashboards, 240, 242–4
 - reconciling, 54–5
 - understanding, 52–3
 - practical and theoretical issues, 50–5, 57
 - productivity
 - chain of effects vs., 40–1
 - current importance of topic, 239
 - historical approaches to, 38–9
 - ROI, 39–40
 - profitability, 44, 56
 - ROC (return on customer), 240, 241, 251–3, 258
 - ROI (return on investment), 39–40, 240, 241, 248–51
 - sales, 43–5, 56
 - short-term vs. long-term measurements, 55
 - stock market performance
 - branding, 47
 - market capitalization of firm, 45
 - marketing dashboards and, 239, 247
 - reactions to marketing events, 45
 - viewed as ultimate purpose of marketing, 239
 - theoretical and practical issues, 50–5, 57
 - what to measure, 41
- Marketing Science Institute, 36, 241
- Markides, C., 272
- Marley, A., 226
- Mason, R., 224
- mathematical validity of measurement
 - frameworks. *See* measurement theory
- Mazvancheryl, S.K., 40
- McGregor, D.M., 348, 351, 456, 457
- measurability
 - in observation of knowledge work, 287, 288, 289
 - of primary school teacher performance, 352–3
- measure fixation, 422, 424
- measurement
 - informational, 297–8
 - motivational, 297–8
 - of performance generally (*See* business performance measurement)
- measurement theory, 142, 218–22
 - aspects of object to be measured, selecting, 223
 - boundaries of object to be measured, delineating, 223
 - common mistakes in business measurement systems, 220–1
 - data used to operate system, 230
 - defining measurement for purposes of, 224–32
 - fundamental concept of, 219
 - historical development of, 224–5
 - indicators vs. measurement systems, 219
 - psychology and, 225, 226
 - reasons for employing BPM, 221
 - representational or axiomatic, 225–6
 - scales, 230, 231
 - sources of data to be measured, 230
 - stakeholders, 223–4
 - steps in constructing practical measurement systems according to, 227–30
 - use of results, 232–3
 - value measurement, 218, 219, 226–7, 232–3
 - what to measure, 222–4
- measures vs. indicators, 128, 219, 220, 222
- Medicare and Medicaid, US, 394–7, 402–3
- Menon, A., 53
- methodologies. *See* frameworks and methodologies
- Meyer, Marshall, xv, 8, 113, 454
- Michelin, 266
- Milgrom, P., 275, 285, 290, 291, 293

- Miller, D., 411
 Miller, J.G., 71
 Mintzberg, Henry, 165, 168, 427
 misinterpretation, 423, 424
 misrepresentation, 422, 424
 Mitchell, Falconer, xv, 142, 179
 Mitchell, R., 223
 Mitroff, I., 224
 Mittal, V., 39–52
 Monden, Y., 67
 Moos, L., 339
 Morgan, N.A., 39–52
 motivation, 290–3
 appropriate motivation for task, providing, 442–4
 challenging objectives, problems associated with setting, 344–5
 crowding out theory of, 436–7, 457
 empirical evidence of, 438–40
 theoretical bases for, 437–8
 extrinsic, 434–6, 442
 fairness, perception of, 438, 444
 financial BPM and (*See under* financial performance measures)
 ICSS (interactive control systems), 292–3
 intrinsic (*See under* pay for performance and motivation)
 knowledge work measurement, 280, 290–4
 pay for performance and (*See* pay for performance and motivation)
 risk and individual reward incentives, 275–7
 “theory X” assumption of, 351
 “theory Y” assumption of, 348
 motivational measurement, 297–8
 M’Pherson, P., 222
 multi-attribute value theory (MAVT), 227
 multidimensionality
 context dimensions of performance
 measurement systems and benefits of loose coupling, 478–80, 488, 489
 of health care systems, 383
 as key characteristic of frameworks and methodologies, 150
 marketing dashboards and, 240, 242–4
 in marketing performance measurement (*See under* marketing performance measurement)
 in operations performance objectives, 68
 of performance prism, 156
 in primary school teacher performance measurement, 353–4
 “silver metric”, impracticality of, 240, 243, 251, 257
 multiple task problem, 440
 Murphy, K.J., 451, 452, 462
 myopia, 422, 424
 Narayanan, V.G., 296, 454, 465
 National Health Service (NHS).
 See under United Kingdom
 National Policing Plan, police force performance measurement, 365, 375
 Neely, Andy, xv, 1, 8, 64, 141, 143
 neighbourhood policing, 369, 376
 net present value (NPV), 240, 245–6, 251
 new public management (NPM), 339, 365, 413, 417, 433. *See also* public sector performance measurement
 Newtonian view of systems, 164
 NHS (National Health Service). *See under* United Kingdom
 Nokia, 177
 non-financial performance measures
 management requirements for optimal performance measures, 115
 problems of, 116
 rise of, 11, 32, 114
 Noordegraaf, M., 415–16, 428
 Nørreklit, Hanne, xv, 142, 179
 Nørreklit, Lennart, xv, 142, 179
 Norton, D.P., 350. *See also* balanced scorecard approach
 NPM (new public management), 339, 365, 413, 417, 433. *See also* public sector performance measurement
 NPV (net present value), 240, 245–6, 251
 objectives, management by, 342
 observability and BPM, 280, 281–90
 attributability, 287, 288, 289
 context insensitivity, 289
 evaluability, 288, 289
 ex post causal ambiguity, 290
 information asymmetries, 285–90
 inseparability, 289
 knowledge work, 285–90
 measurability, 287, 288, 289
 primary school teachers, 352–3
 problems generally arising with, 281–5
 R–H (Ross–Holmström) model, 281–2, 288
 reliability, 289
 Olsen, J., 452
 Olsen, S., 242
 operational responses and performance metrics,
 link between, 478–9
 operations management, 8, 64–5
 balanced sets of measures for, 73, 74

- benchmarking, 74
- cost, 71–2
- of quality, 67
 - trade-offs of, 69
- cost centre, operations viewed as, 65–6
- dependability and, 68
- five operations performance objectives, 68–9
- flexibility, 68, 72
- frameworks and methodologies, need for, 72–4
- future research agendas, 76–7
- Japan's emergence as economic power, effects of, 67
- JIT (just-in-time), 65, 71
- kaizen, 67, 69
- multidimensionality of, 68
- organizational boundaries, moving outside, 74–5
- performance measurement vs. performance management, 75–6
- productivity, 65–6
- psychology of, 76
- quality in (*See* quality)
- quantification and its unanticipated consequences, 73, 74
- speed
- internal and external values associated with, 69
 - multidimensionality of, 68
 - trade-offs of, 69
- strategic changes in, 1960s through 1980s, 66–7
- supply chains, 75, 106–7
- trade-offs between performance objectives, 69
- opportunism, principles of BPM encouraging, 471
- Orbell, J.M., 468
- order fulfilment process, 88, 107
- organizations
- company coherence of BPM systems, 204–5
 - coordination of actions across, 173–4
 - firm-centric performance measurement, problem of, 116–21
 - measurement across (*See* cross-organizational measurement)
 - performance defined from inside or outside, 132–3
 - radicality of innovation in terms of, 304
 - risk in assessing overall performance of, 265–9
 - subunits of
 - coordination of actions across, 173–4
 - performance responsibility, 133
- ossification, 423
- Osterloh, Margit, xv, 36, 431
- Otley, David, xv, 7, 11
- Ouchi, W.G., 291, 455
- outcome vs. process measures in health care system composite indicators, 387
- P&L (profit and loss) statements. *See under* supply chain management
- parental involvement in primary school teacher performance measurement, 354
- patent citation analysis. *See under* innovation performance measurement
- Paton, W.A., 210
- pay for performance and motivation, 431, 433, 444
- appropriate motivation for task, providing, 442–4
 - clear link between performance and reward as basic principle, 455–7
 - complex tasks and, 434
 - crowding out theory, 436–7, 457
 - empirical evidence of, 438–40
 - theoretical bases for, 437–8
 - extrinsic motivation, 434–6, 442
 - fairness, perception of, 438, 444
 - incomplete contracts, situations involving, 433, 441, 442
 - intrinsic motivation, 434–6, 456–7
 - crowding out of (*See* subhead “crowding out theory”, *this entry*)
 - disadvantages of, 441–2
 - factors favouring or undermining, 443–4
 - situations requiring, 440–1, 442
 - in knowledge work, 434
 - perversity and dysfunction related to, 433–4, 456
 - for primary school teachers, 351–2
 - conflicts between objectives, 356–8
 - subjectivity, reliability and measurability problems, 352–3
- PCA (principal components analysis), 388
- peer-based performance reviews, 176–7
- Peppers, D., 240, 251, 252, 258
- performance-based pay. *See* pay for performance and motivation
- Performance Management in Schools initiative, 340. *See also* primary school teachers, measuring performance of
- performance measurement, generally. *See* business performance measurement
- performance measurement matrix (PMM), 145, 149, 150
- performance prism, 141, 143–4, 151–6
- capabilities, 155
 - case studies, 156–60
 - common findings of, 160

- performance prism, (cont.)
 DHL UK, 156–8
 private sector Canadian firm, 159
 private sector Middle Eastern firm, 159–60
 public sector UK health care organization, 158
 public sector US employment services, 159
 small charitable association, UK, 158
 competition in, 151, 155
 key characteristics of existing frameworks, incorporating, 149–51, 156
 managerial buy-in, 160
 primary school teacher performance measurement using, 353
 processes, 154
 reasons for adopting, 160
 stakeholder approach, 151–3
 strategies, 153–4
 timescale of projects, 160
 perversity and dysfunction associated with basic BPM principles
 accurate measurement of performance, 463, 464, 465–6
 clear specification of performance criteria, 462
 opportunism, principles encouraging, 471
 reward and performance, clear link between, 456
 perversity and dysfunction in airline delay tracking and assignment systems, 459–61
 perversity and dysfunction in pay for performance, 433–4, 456
 perversity and dysfunction in public sector performance measurement, 238, 417–18
 anomalous results, 427–8
 cybernetics, 426
 different types of, situations leading to, 422–6
 gaming, 423, 424
 measure fixation, 422, 424
 misinterpretation, 423, 424
 misrepresentation, 422, 424
 myopia, 422, 424
 ossification, 423
 police force, 366
 pupils' academic progress as teacher performance measure, 346
 reasons for employing measurement associated with particular perversities, 423–6
 suboptimization, 422
 tunnel vision, 422
 Pfanzagel, J., 226
 phenomenology, 189
 facts, truth's phenomenological grounding in, 187–8
 performance creating firm as phenomenon, 198–9
 philosophical issues in BPM. *See* theoretical foundations of BPM
 Pidd, Mike, xv, 238, 408, 418, 419
 Piercy, N., 45
 Pike, Stephen, xv, 142, 218, 222, 232
 Pittman, T.S., 436
 plan–do–check–act (PDCA) cycle, 168, 326, 409
 planning
 in adaptive organizations (*See* adaptive planning model)
 marketing dashboard metrics for, 253–6, 257
 SCM and, 90
 Plato's cave analogy, 129
 Plunkett, J.J., 70
 PMM (performance measurement matrix), 145, 149, 150
 Poisson regression analysis, 312, 313
 police force performance measurement, 237, 363
 as accounting system, 372–3
 antisocial behaviour, 369
 BCU (basic command unit), role of, 367, 368, 373
 bio power, 371, 375
 case studies of four police forces, 366, 369
 citizen focus, 369, 376
 Compstat model, 367
 development of, 365–6
 discipline, 370–1, 372, 374–5, 376–9
 fear of crime vs. level of crime, 369
 funding and performance, links between, 375
 governmentality, 371–2, 375–6, 376–9
 history, structure and governance of police force, 363–5
 iQuanta system, 367, 374, 380
 as knowledge and power, 363, 369–72, 379–80
 measurement to management, shift between, 376
 National Policing Plan, 365, 375
 neighbourhood policing, 369, 376
 perverse and dysfunctional consequences of, 366
 Police Standards Unit, 367, 368, 373, 375
 political dimensions of, 363, 364, 366, 373, 375, 380
 PPAF (Policing Performance Assessment Framework), 365, 374, 375, 380
 PSAs (public service agreements), 365, 367, 373, 375
 self-assessment, 371, 375
 sovereignty, 370–1, 372, 373–4, 376–9
 SP!s (statutory performance indicators), 365, 375

- transitions within sovereignty–discipline–governmentality triangle, 376–9
- political dimensions
 - of police force performance measurement, 363, 364, 366, 373, 375, 380
 - of public sector performance measurement generally, 416–17, 421, 426
- Pollitt, C., 408
- Popper, Karl, 214
- Porras, J.I., 243, 272
- Porter, Michael, 167
- positivism, 189
- Powell, Tony, 238, 318
- power
 - police force performance measurement as knowledge and, 363, 369–72, 379–80
 - SCM (supply chain management), power and leadership structure, 91
- Power, M., 73
- PPAF (Policing Performance Assessment Framework), 365, 374, 375, 380
- practical applications and challenges, 4, 237–8
- pragmatic constructivism, 142. *See also* theoretical foundations of BPM
 - coherence
 - communication and social coherence, 196
 - pragmatic coherence to purpose and objectives of BPM systems, 198
 - facts, 181
 - integrated learning theory (*See* integrated learning theory of truth)
 - mechanical realism vs., 185–6
 - reality, concept of, 181
 - truth, 186, 196–7, 212–14
- Prendergast, C., 435, 456
- primary school teachers, measuring performance of, 237, 339–40, 359
 - agency theory, 350
 - conflicts between objectives, 356–8
 - “customer” (parent/pupil) involvement in, 354
 - methodology of studying, 340
 - multiple appraisers, 353–4
 - objectives of performance measurement
 - conflicts between, 356–8
 - defined and described, 341–2
 - objectives of teachers and goal-setting theory, 341–2
 - challenging objectives, problems associated with setting, 344–5
 - conflicts between performance measurement objectives and, 357
 - defining “performance” and “objectives”, 342–4
 - environmental uncertainty and control over performance, 345–6
 - focusing attention on, measurement to achieve, 342
 - strategy implementation through goal alignment, 349–51
- overall performance measurement, 354–6
- pay rates and, 351–2
 - conflicts between objectives, 356–8
 - subjectivity, reliability and measurability problems, 352–3
- Performance Management in Schools initiative, 340
- Performance Prism framework used for, 353
- policy implications, 359
- for professional development, 348
 - availability issues, 349
 - conflicts with other objectives, 356–7, 358
 - financing issues, 349
 - identification and communication of needs regarding, 348
- pupils’ academic progress as teacher performance measure, 346
 - availability of information, 347–8
 - conflicts between objectives, 357
 - unintended/dysfunctional consequences of, 346
 - validity of, 347
- self-appraisal, 353
- stakeholders, 350, 353–4
- standards for teachers, 354–6
- for strategy implementation through goal alignment, 349–51, 358
- subjectivity, reliability and measurability problems, 352–3
- subordinate involvement in, 354
- 360-degree feedback, 353
- principal components analysis (PCA), 388
- principle agent theory, 435
- processes
 - business process redesign/re-engineering, 151, 154
 - health care system composite indicators, using process vs. outcome measures in, 387
 - Macro Process Model of the organization, 146
 - performance prism and, 154
 - SCM (supply chain management)
 - business or management processes, 86–90, 105–6
 - process-based view of, 83
 - statistical process control, 70
- product and service agreements (PSAs)
 - CRM (customer relationship management) and, 87
 - customer service management and, 87
 - supplier relationship management, 89

- product development and commercialization, 89
- product flow facility structure, 91
- production, generally. *See* operations management
- productivity
- in marketing (*See under* marketing performance measurement)
 - in operations management, 65–6
 - in public sector performance measurement, 408
- professional development of primary school teachers. *See under* primary school teachers, measuring performance of
- professionals
- creative work, intrinsic motivation required for, 440
 - knowledge workers (*See* knowledge work measurement)
 - in public sector performance measurement, 415–16
 - teachers (*See* primary school teachers, measuring performance of)
- profit and loss (P&L) statements. *See under* supply chain management
- profitability
- as financial performance measurement, 13, 15, 17, 18, 19
 - as marketing performance measurement, 44, 56
- project management, CbM in. *See* context-based measurement
- promotions, monitoring, 254
- PSAs (product and service agreements). *See* product and service agreements
- PSAs (public service agreements) and police force performance measurement, 365, 367, 373, 375
- psychological contract theory, 437–8
- psychology
- intrinsic motivation in, 435
 - measurement theory and, 225, 226
 - observability problem, 283
 - of operations management, 76
 - performance prism and, 152
 - TASK (talent, skill and knowledge) differentials, 295
- psychometrics, 226
- public sector performance measurement, 4, 237–8, 383–4
- ambiguity and uncertainty, 415–16, 426
 - Atkinson Review, 408, 409
 - cybernetics, 413–15, 426
 - education (*See* primary school teachers, measuring performance of)
 - health care (*See* health care systems, use of composite indicators in)
 - NPM (new public management), 339, 365, 413, 417, 433
 - pay for performance in, 433 (*See also under* primary school teachers, measuring performance of)
 - perversity and dysfunction (*See* perversity and dysfunction in public sector performance measurement)
 - police force (*See* police force performance measurement)
 - productivity, 408
 - professionally skilled workers, 415–16
 - professionals in, 415–16
 - reasons for employing, 409–17
 - central control, 413–16, 419, 421, 426
 - competences, identifying, 410–11, 419, 424
 - determining what works, 409–10, 419, 421, 424
 - perversity and dysfunction associated with, 423–6
 - public accountability, 411–13, 419, 424
 - SSM (soft systems methodology) used to examine, 418–21
 - symbolic/political reasons, 416–17, 421, 426
 - RSS (Royal Statistical Society) review, 409, 423
 - public service agreements (PSAs) and police force performance measurement, 365, 367, 373, 375
 - pupil involvement in primary school teacher performance measurement, 354
 - pupil progress as teacher performance measure. *See under* primary school teachers, measuring performance of
 - pyramid of ratios, 14–17, 144
 - quality, 70–1
 - cost of, 67
 - EFQM (*See* European Foundation for Quality Management)
 - EOQ (economic order quality) model, 67, 70
 - internal and external values associated with, 69
 - Malcolm Baldrige National Quality Award, 1, 70, 149
 - multidimensionality of, 68
 - rise in popularity of “quality gurus”, 67
 - statistical process control, 67
 - TQM (total quality management), 70, 151, 409, 418
 - trade-offs of, 69
 - Quinn, J.B., 256
 - radical innovation. *See under* innovation performance measurement
 - R&D (research and development) collaboration and innovation performance. *See* innovation performance measurement

- Rastas, T., 222
- rationalism, 192
- ratios, pyramid of, 14–17, 144
- reality/realism
- communication and, 183–4
 - concept of, 181
 - integration and, 184
 - mechanical realism vs. pragmatic constructivism, 185–6
 - misleading use of, 214–15
- reasons for employing BPM, 160, 221. *See also under* public sector performance measurement
- Rego, L.L., 40
- regulations and laws
- risk management, 262
 - stakeholders, legal and regulatory communities as, 152
- Reichheld, F.E., 49
- Reinartz, W., 39
- relative performance contracts, 174–8
- relativity of concept of performance, 135–6
- reliability
- in observation of knowledge work, 289
 - performance-related pay for primary school teachers and, 352–3
- remuneration committees (RemCos), 276
- reporting on KPIs (key performance indicators), 170–1
- representational or axiomatic measurement theory, 225–6
- research and development (R&D) collaboration and innovation performance. *See under* innovation performance measurement
- residual income, 25
- resource management, 171–3, 393
- responsibility and accountability
- airline delay tracking and assignment, accepting responsibility in, 465–6
 - financial performance measures, responsibility centres for, 23
 - marketing accountability, 242
 - public accountability, 411–13, 419, 424
 - subunit performance, 133
 - teams, focus of accountability on, 174–8
- restaurant chain case study. *See under* loose coupling in performance measurement systems
- results–determinants framework, 146, 147, 148
- return on customer (ROC), 240, 241, 251–3, 258
- return on investment (ROI)
- financial performance measurement and, 14, 18–22
 - in marketing, 39–40, 240, 241, 248–51
- returns management, 89
- returns, shareholder rate of, 18–22
- revenue centres, 23
- rewards
- clear link between performance and, 455–7, 466–8
 - pay for performance (*See* pay for performance and motivation)
 - risk and, 91, 275–7
- Ridgway, V.F., 73, 77, 284, 417
- Riley, F.D.O., 47
- risk and BPM, 237, 261–4, 277
- definition of risk, 264
 - economic profit models, 266, 273, 274
 - “face” and risk appetite, 264
 - in health care systems, 392
 - heat charts, 270
 - internal risk management, 269–75
 - legal and regulatory requirements, 262, 263
 - lender ratings, 268–9
 - overall company performance, assessment of, 265–9
 - perspectives on links between, 264, 265, 277
 - for quoted companies, 266–8
 - reward and risk, 91, 275–7
 - SCM (supply chain management), risk and reward structure in, 91
 - for unquoted companies, 268
 - VaR (value at risk), 271, 274
- Roberts, John, xvi, 237, 239, 275, 285
- ROC (return on customer), 240, 241, 251–3, 258
- Rogers, M., 240, 251, 252, 258
- ROI. *See* return on investment
- rolling forecast, 169–70, 172
- ROMI (return on marketing investment), 39–40, 240
- Rook, P., 320
- Roos, Goran, xvi, 142, 218, 222
- root definitions, 418–19, 421
- Rosenbloom, R.S., 307
- Ross, S.A., 281
- Royal Society of Arts, Manufacturers and Commerce, 2
- Royal Statistical Society (RSS) review of public sector performance measurement systems, 409, 423
- Ruch, W.A., 66
- Rudduck, Jean, 354
- Rust, R.T., 251
- Ryan, R.M., 438
- sales as marketing performance measurement, 43–5, 56
- Sarbanes–Oxley Act, 17

- SAST (strategic assumption surfacing and testing), 224
- satisfaction of customers, 47–8
- scales
- composite indicators, developing, 388–9
 - in measurement theory, 230, 231
- Scholes, J., 418
- Schonberger, R.J., 67
- SCM. *See* supply chain management
- Searle, J., 206, 209
- SEC (Securities and Exchange Commission), 262, 263
- Securities and Exchange Commission (SEC), 262, 263
- self-appraisal
- by police force, 371, 375
 - by primary school teachers, 353
- Selznick, P., 452, 462
- “semi-confusing” information systems, 481
- senior management support for BPM projects, 160
- “sense and respond” management, shift from “make and sell” paradigm to, 163–4
- sensitivity analysis for composite indicators in health care systems, 393
- Sevin, Charles, 39
- shareholders
- financial reporting to, 18–22
 - individual reward incentives and risk, 275–7
 - marketing dashboards and shareholder value, 239, 247
 - risk in BPM calculated using TSR (total shareholder return), 266–8
- Sharpe ratio, 267
- Shell, 2
- Shervani, T.A., 44, 45
- Sheth, J.N., 39–52
- “silver metric”, impracticality of, 240, 243, 251, 257
- Simon, C.J., 46
- Simon, H.A., 456, 462
- Simons, R., 292
- Sisodia, R.S., 39–52
- Skandia, 2
- skilled workers
- creative work, intrinsic motivation required for, 440
 - knowledge workers (*See* knowledge work measurement)
 - in public sector performance measurement, 415–16
 - teachers (*See* primary school teachers, measuring performance of)
- Skinner, Wickham, 64, 67, 72
- Slack, N., 72
- SMART (strategic measurement and reporting technique) pyramid, 145, 146, 150
- Smith, Peter, xvi, 237, 383, 417, 422, 423, 426
- social constructivism, 180, 196
- soft systems methodology (SSM), 418–21
- Sonnenfeld, J., 223
- sources of data to be measured, 230
- Southwest Airlines, 171, 173, 177, 178
- sovereignty and police force performance measurement, 370–1, 372, 373–4, 376–9
- speed in operations management
- internal and external values associated with, 69
 - multidimensionality of, 68
 - trade-offs of, 69
- SPIs (statutory performance indicators), police force performance measurement, 365, 375
- Srivastava, R.K., 44, 45
- SSM (soft systems methodology), 418–21
- stakeholders
- measurement theory and, 223–4
 - in performance prism framework, 151–3
 - in primary school teacher performance measurement, 350, 353–4
- star ratings, 401–2, 424
- statistical process control, 70
- statutory performance indicators (SPIs), police force performance measurement, 365, 375
- Sterling, R.R., 210
- Stern Stewart, 11, 25, 30, 33
- Stevens, S.S., 225
- stock market performance
- as marketing performance measurement (*See under* marketing performance measurement)
 - risk in BPM and, 266–8
- stockholders. *See* shareholders
- strategic assumption surfacing and testing (SAST), 224
- strategic measurement and reporting technique (SMART) pyramid, 145, 146, 150
- strategy
- in adaptive organizations, 165–7
 - mapping, 34
 - Mintzberg’s description of, 165, 166
 - in performance prism framework, 153–4
 - primary school teacher performance measurement for implementation of, 349–51, 358
- student involvement in primary school teacher performance measurement, 354
- student progress as teacher performance measure. *See under* primary school teachers, measuring performance of
- suboptimization, 422

- subunits
 - coordination of actions across, 173–4
 - performance responsibility, 133
- subjectivity problems of performance-related pay
 - for primary school teachers, 352–3
- subordinate involvement in performance
 - measurement, 354
- Sullivan, M.W., 46
- Suppes, P., 225
- supply chain management (SCM), 8, 82–4
 - alignment of performance measures across supply chain, 97–9, 99–100
 - analysing links in supply chain, 102–3
 - business or management processes, 86–90, 105–6
 - conceptual framework for, 84–5
 - corporate and supply chain performance, linking, 97
 - corporate culture, 91
 - cross-organizational comparison and replication, 107–9
 - customer base
 - CRM (customer relationship management), 87, 102–3
 - customer service management, 87
 - demand management, 88
 - order fulfilment, 88, 107
 - performance of customers, 100
 - P&L statements (*See* subhead “P&L (profit and loss) statements”, *this entry*)
 - product development and commercialization, 89
 - returns management, 89
 - defining, 95
 - demand management, 88
 - EVA[®] (economic value added) and, 102, 103, 104, 106–7
 - frameworks
 - GSCF conceptual framework, 84–5
 - metrics, framework for developing, 100–9
 - future research directions, 109–10
 - information flow structure, 91
 - inventory turns, 92–5
 - management components, 90–1
 - management methods and philosophies, 91
 - manufacturing flow management, 88
 - mapping supply chain, 101, 102
 - metrics of, 83–4
 - framework for developing, 100–9
 - need for new types of, 95–7
 - problems with existing, 92–5
 - strategy and metrics, linking, 97–9, 99–100
 - network structure, 85–6
 - operations management and, 75, 106–7
 - order fulfilment, 88, 107
 - P&L (profit and loss) statements, 105
 - business or management processes, realignment of, 105–6
 - developing, 103–5
 - operational measures aligned with, 106–7
 - value of, 110
 - planning and control of operations, 90
 - power and leadership structure, 91
 - process-based view of, 83
 - product development and commercialization, 89
 - product flow facility structure, 91
 - PSAs (product and service agreements)
 - CRM (customer relationship management) and, 87
 - customer service management and, 87
 - supplier relationship management, 89
 - replication across organizations, 107–9
 - returns management, 89
 - risk and reward structure, 91
 - strategy and metrics, linking, 97–9, 99–100
 - suppliers
 - performance of, 100
 - P&L statements (*See* subhead “P&L (profit and loss) statements”, *this entry*)
 - SMI (supplier managed inventory), 102, 105
 - SRM (supplier relationship management), 89, 102–3
 - time compression, 96
 - work structure, 91
- symbolic reasons for public sector performance
 - measurement, 416–17, 421, 426
- Szymanski, D.M., 48
- Tableau de Bord, 148, 150
- tacit knowledge, intrinsic motivation required for transfers of, 441
- Tang, S.H., 438
- TASK (talent, skill and knowledge) differentials, 238, 280–1, 295–8, 299
- Taylor, F.W., 456
- teaching, BPM in. *See* primary school teachers, measuring performance of
- teams, focus of accountability on, 174–8
- technologically radical innovation, 305
- theoretical foundations of BPM, 4, 7–9, 142, 179–80. *See also* coherence theory; integrated learning theory of truth; measurement theory; pragmatic constructivism
- communication, 172, 183–4
- correspondence theory, 188–9
- dimensionalization of measurement, 191, 199–200, 212

Cambridge University Press

978-0-521-18876-0 - Business Performance Measurement: Unifying Theory and Integrating Practice, Second Edition

Edited by Andy Neely

Index

[More information](#)

- theoretical foundations of BPM, (cont.)
 epistemic platform, 189–91
 data, truth of vs. belief in, 208–12
 levels of, 201
 modelling and dimensionalizing, 199–200, 212
 facts, 181
 correspondence and, 188–9
 in mechanical realism, 185–6
 truth's phenomenological grounding in, 187–8
 grounded theory, 189, 190, 191, 192, 199–200, 212
 integration, 184, 196–7
 learning approach to validity and truth, *See also* integrated learning theory of truth)
 logic, 182, 192–3
 marketing performance measurement, 50–5, 57
 phenomenology, 189
 facts, truth's phenomenological grounding in, 187–8
 performance creating firm as phenomenon, 198–9
 positivism, 189
 rationalism, 192
 reality, concept of, 192 (*See also* reality/realism)
 social constructivism, 180, 196
 truth, 142, 179–80, 214–15
 belief vs., 208–12
 coherence theory of, 192–3
 correspondence theory of, 188–9
 integrated learning approach to, 196–7 (*See also* integrated learning theory of truth)
 phenomenological grounding of, 187–8
 pragmatic perspective on, 186, 196–7, 212–14
 proactive vs. realized or pragmatic, 196–7, 212–14
 theoretical conditions for valid truth in BPM, 186
 values, 182–3
 belief vs. truth, 208–12
 coherence theory and, 193–4
 “theory X” assumption of motivation in organizations, 351
 “theory Y” assumption of motivation in organizations, 348
 Thomas, A.L., 210
 Thompson, J.D., 291, 455
 360-degree feedback, 353
 time compression, 96
 timescale of BPM projects, 160
 Titmuss, R.M., 439
 Tobin's q, 47
 Tomkins, 178
 Torrington, D., 342, 356
 total quality management (TQM), 70, 151, 409, 418
 total shareholder return (TSR) and risk in BPM, 266–8
 Toyota, 67, 163, 165, 172–3
 TQM (total quality management), 70, 151, 409, 418
 Trajtenberg, M., 308
 transaction cost theory, 435
 transfer price, 24
 Triands, H.C., 264
 truth. *See under* theoretical foundations of BPM
 TSR (total shareholder return) and risk in BPM, 266–8
 tunnel vision, 422
 Turnbull requirements, 262
 Turney, P.B.B., 65
 Tushman, M., 307
 Tversky, A., 227
 uncertainty. *See* ambiguity and uncertainty;
 control issues; environmental factors
 United Kingdom
 NHS (National Health Service)
 composite indicators used to evaluate, 398–9, 401–2
 performance prism case study, 158
 perversity and dysfunction in, 424
 public accountability of, 411, 424
 performance prism case studies (*See under* performance prism)
 police force (*See* police force performance measurement)
 primary school teachers (*See* primary school teachers, measuring performance of)
 United States
 Medicare and Medicaid, 394–7, 402–3
 performance prism framework used in public sector employment services, 159
 SEC (Securities and Exchange Commission), 262, 263
 user-radical innovation, 304
 valid measurement frameworks
 applied mathematics and (*See* measurement theory)
 in integrated learning theory (*See* integrated learning theory of truth)
 value at risk (VaR), 271, 274
 value measurement
 in combining variables for composite indicators, 389–90
 EVM (earned value measurement), 320
 in measurement theory, 218, 219, 226–7, 232–3

Cambridge University Press

978-0-521-18876-0 - Business Performance Measurement: Unifying Theory and Integrating Practice,
Second Edition

Edited by Andy Neely

Index

[More information](#)

- values in BPM, 182–3
 belief vs. truth, 208–12
 coherence theory, 193–4
- van de Kragt, A.J.C., 468
- Varadarajan, P.R., 53
- variable pay for performance. *See* pay for
 performance and motivation
- Vickers, J., 454
- Vollmann, T.E., 71
- Wallander, Jan, 178
- Walton, R., 473
- Wang Laboratories, 145
- WBS (work breakdown structure), 319–21
- Weiss, A., 309, 313
- Weltanschauung, 419
- WHO (World Health Organization),
 use of composite indicator by, 399, 401
- Wiersma, U.J., 438
- Williams, R.S., 342, 350, 353, 356
- Williamson, O., 451
- Wivel, Teddy, 151
- Womack, J.P., 75
- work breakdown structure (WBS), 319–21
- World Health Organization (WHO), use of
 composite indicator by, 399, 401
- Worldcom, 179
- Wragg, E.C., 352