Index

Abraham, Claude 180
accountability, development projects 122, 129, 130
accounting prices 23, 24
see also shadow prices
actual use value, in total economic valuation 189–90
additionality, in EBRD eligibility criteria 85
affordability 9, 60–61, 73
age-dependency 217–19, 222–3, 224–5, 231, 242–3
Agenda 2000 128
agents, in DS framework 13–14, 15
air pollution 166, 189, 191, 193, 194, 202
air quality-related legislation 243
Akasaka, Kiyo 120–21
Alberini, A. 202, 222
altruism 190, 211, 224, 261
Arrow, Kenneth J. 255, 257, 261
Arthur, W. B. 209, 224
asymmetric information
evaluators 24
and incentive theory 39–40
and infrastructure investment 138–44, 148
principal-agent framework 27, 29, 30
on project returns 10
auditing, and CBA 71
Australia
CBA in policymaking 236, 238–9
environmental legislation and initiatives targeted at children 243, 244, 245, 246
health impact valuation 241
social cost of public expenditure 259
Austrian Economics School 86–7
average marginal utility (AMU), and regional welfare weights 310, 315–16, 317
Bailey, Martin J. 255
banking, soundness of 85
Barone-Lange-Taylor framework 14, 22
Barsky, R. B. 263–4
Bateman, I. J. 198, 199–200, 202
benchmarks 10, 55
see also monitoring benchmarks; project return benchmarks
benefits transfer (BT) 191, 198–202
bequest value 190, 211, 224, 225
Bergson-Samuelson social welfare function 21, 308
bicycle helmet legislation 243–4
Blomqvist, Å. 213–15
Blue, E. N. 301, 309
Blundell, R. 286, 288
Boiteax case, in DS framework 15
Bonnafox, Alain 181
bonuses, and project return benchmarks 32–3, 36, 40–41
Boscolo, M. 256, 265
Brealey, Richard A. 255
Brouwer, R. 202
Brown, J. A. C. 264
budget constraints
CBA of transport projects in France 174, 183–4, 185, 186–7
in value of statistical life 210, 212, 216, 220, 230–31
Burgess, Robin 86, 87
business conduct standards 94, 95
Campbell, Donald T. 112
Canada 201, 236, 238–9, 241, 244, 245
capacity building, in development assistance 124, 128, 131
capital asset pricing model (CAPM) 254
cardinal utility 299
Carson, R. T. 194, 195, 196–7, 198
cash flow, comparisons in CBA 114
catastrophe risk 284
CBA Guide see Guide to Cost-Benefit Analysis of Investment Projects (EC)
central planners, in Barone-Lange-Taylor framework 14, 22
Chang, F. R. 225
chemicals and dangerous substance-related policies and legislation 244
Children’s Environmental Health Action Plan for Europe 246
child’s health in environmental policymaking
environmental legislation and initiatives in OECD countries 243–5
policy valuation, cross-country comparisons 240, 241
risk and valuation differences between adults and children 242–3
supra-national research and policy-related initiatives 245–6
choice modelling (CM) 205
Circular A-94 7, 12
co-financing contracts
EU mechanisms 34–6
and evaluation 30–32
and funding-gap method 59, 60
and incentives 32
and project return benchmarks 32–4
suboptimal projects 69–70
co-financing rate (CR), in funding-gap method 56, 58, 59
CO₂ tonne values, CBA of transport projects in France 167
Cohesion countries 285, 291, 292
Cohesion Fund
co-financing mechanisms 34–6
infrastructure investment, in 2007–2013 period 137
institutional setting 50–51
origins and purpose 68–9, 137
resource allocation in programming cycle 51–4
funding-gap method 52, 53, 55–9
funding-gap method in 2007–13 period 59–61
Cohesion Policy 1, 2–3, 9, 49, 50–51
see also Cohesion Fund
collective profitability in CBA of transport projects in France 171
Commissariat général du Plan 164
Common Agricultural Policy (CAP) 111, 130, 131
communal welfare, and welfare weights 298, 299–300
community-based assistance programs 128, 130
Community Strategic Guidelines 52
compensation, Kaldor-Hicks criterion 295
competition 88–9, 95
congestion, transportation 144, 153, 160, 161, 168
conjoint analysis 219–20
consumers, and principal-agent framework 26, 27
consumption
in value of statistical life 209–10, 211, 212–14, 215, 216, 217, 218–19, 224
and welfare weights 298–302
consumption per capita, and welfare weights 301
consumption utility, and welfare weights 298–301
contingent valuation (CV) 194–8, 219, 222, 224
contracts 123
see also co-financing contracts; incentive contracts; incomplete contracts; low-powered contracts
convergent validity 197
corporate governance standards 94, 95
corruption 24, 40, 128–9
see also moral hazard; principal-agent framework
cost-benefit analysis (CBA)
applications 71
in economic evaluation tool comparison 233–6
and ethics 296–7
European Commission institutionalization of 54–5
and European Investment Bank 69–70, 72–4
guidance 7, 9, 12, 38–9, 54–5
importance 52–3, 236
intellectual origins 83, 113
limitations 4–5, 53–4, 83, 84, 114, 115, 116
obstacles to use 239
purpose 50, 83
research agenda 6–10
rise and decline 113–16
cost-benefit analysis of transport projects in France achievements 174–5
further research 177–8
issues 175–7
method for traffic infrastructure programming 180–87
principles of project assessment 165
recent changes 172–4
standardized variations for environmental and non-marketable goods 166–9
surplus calculation problems 169–70
cost-effectiveness analysis (CEA) 234, 237
cost of capital 253, 266–7, 269, 280
cost of risk 254, 255, 257
costs see cost of risk; discounted investment cost (DIC);
investment costs; maintenance costs; monetary costs; operating costs; opportunity costs; rate of return on total costs (FRR/c);
social costs; sunk costs; systematic risk costs; time costs; transaction costs
Cowell, F. A. 262–3, 265, 286, 289, 309
Czech Republic 304, 305
de Blaeij, A. 220
de-commitment rule 69
de Rus, Ginés 138
death rates 283–4
Deaton, A. 264, 287
decision-making, CBA of transport projects in France 165, 177, 178
demand 148–60, 161, 170, 265, 287–9
see also income elasticities of demand; price elasticities of demand
demonstration effects, in transition impact criteria 93–4, 95
Denmark 284
Desvousges, W. 196, 221–2
developed countries 202
see also OECD countries; individual countries
developing countries 202, 291, 300
development 110, 115–17
development assistance 111–12, 115–16, 124, 128, 131
see also foreign aid contributions
development cooperation 120–21
development evaluation and development policy coherence 120–21
and development policy reform 117–19
and environmentalism 125
and global change 119–21
and neo-liberalism 116
new institutional economics and financial risk management 123–4
option theory 124
origins of discipline 112–13
result-based evaluation 112, 122–3
and structural fund, management 127–30
and structural funds, relevance of 125–7
development objectives, and EU co-financing mechanisms 35
development policies 117, 119–20, 121, 127
development projects 122, 129, 130
DG Environment 217, 222
DG Regional Policy 32, 39, 55, 70, 80–81, 125
DG Tren 77
diminishing marginal utility of income 297–300, 302, 303, 307
discount rate see financial discount rate; nominal discount rate; real discount rate; social discount rate (SDR); utility discount rate
discounted cash flow methodologies, errors 53–4
discounted investment cost (DIC) 56, 58, 59, 60
discounted net revenue (DNR), in funding-gap method 56, 58, 59, 60
dose-response functions, and total economic valuation 191
Dowley, M. 264–5
downstream distributor linkages, in transition impact criteria 88, 89, 95
Drèze, J. 6, 11, 13, 22
see also DS framework
DS framework
agents 13–15, 17–18
departures from in real CBA world 21–2
information 20–21, 22
planning and evaluation 15–19
policies and objectives 14–15
shadow prices rules 19–22
Dupuit, Jules 10, 83
Dupuit surplus 165, 169–70, 171, 174, 176, 177, 181–2
Eastern Europe 199
see also Czech Republic; Slovakia; Turkey
Eckstein, Otto 256, 259, 261, 265
economic analysis, and development evaluation 123–5
economic evaluation 144–7, 233–8
see also total economic valuation
economic net present value (ENPV) 55–6, 57
economic rate of return (ERR) 72
efficiency 50, 51, 52, 90–91, 95, 110
Efficient Market Hypothesis (EMH) 254–5, 268–9
effort 23, 24, 26, 29
elasticity of marginal utility of consumption 282, 285–91, 292, 301, 307
elasticity of marginal utility of income 262–5, 268, 304, 305, 307, 308
employment benefits 72
employment opportunities 8, 296, 300, 302
employment safety conditions, and value of statistical life 220–21
energy 111
engineering CBA 71
enlargement, EU 110
entrepreneurship 91, 95
environmental evaluation
benefits transfer (BT) 198–202
choice modelling 205
data 199, 201, 202, 204
guidelines 198, 199, 204
importance 188
limitations 188, 204
revealed preference methods (RPMs) 192–4, 197
stated preference methods 193, 194–8
and total economic evaluation 189–91
environmental legislation 242–3
environmental policymaking in OECD countries 238–40, 241
see also children’s health in environmental policymaking
Environmental Protection Agency (EPA) 222, 244
environmental tobacco smoke (ETS)-related legislation 244
environmentalism 125
equally distributed income equivalent (EDEI), and regional welfare weights 308, 310, 313–15, 316, 317
ethics
and CBA 296–7
and elasticity of marginal utility 262, 266
and future marginal utility 260–61
standard setting, in transition impact criteria 94, 95
and welfare weights 303
ethnic groups 296, 298, 302, 303
EU member states
CBA frameworks 54
death rates 283
in DS framework 14, 15, 18, 19, 20
and European Commission conflicting objectives 139–44
growth per capita real consumption 284–5
national public resources, and funding-gap method 59, 60
operational programmes 52
regional development aid 300
Index

social discount rate 280–81, 291
see also individual countries

Europe 202
see also Eastern Europe; EU member states; individual countries

European Bank for Reconstruction and Development (EBRD) 1, 55, 80–81, 84–5, 86, 137
see also transition impact methodology

European Commission (EC)
CBA importance in resource allocation 52–3
CBA institutionalization 54–5
co-financing mechanisms 34–6
environmental initiatives targeted at children 245, 246
and European Investment Bank 68–9, 70, 77, 78–9, 80–81
and European Investment Fund 77–8, 80
and European PPP Expertise Centre 81
and ex-ante project returns 10
Guide to Cost-Benefit Analysis of Investment Projects 7, 9, 12, 38–9, 54, 276
health impact valuation 241
Impact Assessment Guidelines 232
and member state conflicting objectives 139–44
objective function 51–2
social discount rate 258, 276, 280, 281, 292
as social planner in DS framework 15, 18, 19, 20
and welfare distribution 9

European Constitutional Treaty 37–8

European Environment and Health Strategy 246

European integration 111–12

European Investment Bank (EIB)
2007–2013 programming cycle 77–8, 80–81, 82, 137
challenges 82
described 65
and economic rate of return 72, 76
and European Commission 68–9, 70, 77, 78–9, 80–81

and European PPP Expertise Centre 81
infrastructure funds 137
and Jaspers 55, 80–81
and Jeremie 81
and Jessica 81
loans 65–7
objectives 65, 68
origins 65, 68
rates of return on approved loans 72, 73
and technical assistance 78, 80

Universities Research Action Plan 81
see also project and programme assessment at European Investment Bank

European Investment Fund (EIF)
77–8, 80

European PPP Expertise Centre (EPEC) 81

European Regional Development Fund (ERDF) 2, 3, 76

European Science Foundation (ESF) 2

evaluation see development evaluation; economic evaluation; environmental evaluation; ex-ante evaluation; ex-post evaluation; policy valuation; project evaluation

evaluators
asymmetric information 24
in DS framework 18–19, 20, 22
and principal-agent framework 24–5, 26, 27, 28–9, 30, 31, 32
reputation bonuses 32
and shadow price information 39, 41
and shadow price uncertainty 24

Evans, David 8, 261, 262, 263, 264, 265, 283, 284, 286, 287–8, 289, 290, 303, 304, 305, 307, 308, 309

Evans, M. F. 217, 223

EVRI database 201

ex-ante evaluation
incentives 32–4, 41
principal-agent framework 25, 28, 29, 30, 31
ex-ante information 10, 25, 28

ex-post evaluation
CBA of transport projects in France 174
costs 29
incentives 32–4
principal-agent framework 25, 27, 28, 29
and project return benchmarks 32–4
ex-post information 10, 25, 28
existence value 190
expected utility, in value of statistical life 209–10, 211, 212–13, 218, 224
experimental and quasi-experimental designs, in development evaluation 112, 122–3
expert views, and elasticity of marginal utility 265
Feldstein, M. S. 256, 257, 258, 259–60, 265
Fellner, William 286, 287, 309
Final Household Consumption, in CBA of transport projects in France 166, 168
financial analysis, performance indicators 9–10
financial discount rate 33, 55, 269
financial innovation 94, 95
financial net present value (FNPV), and funding-gap method 56, 57
financial profitability 171
financial risk management 123–5
Finland 239
First Year Rate of Return (FYRR), and CBA of transport projects in France 171, 187
fiscal constraints 111
Fisher, Irving 297, 303
Flores, N. 197
Florio, Massimo 7, 8, 9, 10, 35, 51, 55, 137, 148, 178, 276, 285, 291
Flyvbjerg, Bent 138, 173
food demand 265, 287–9
food safety regulations 245
foreign aid contributions 286, 291, 292
see also development assistance
foreign investment projects 89
France
elasticity of marginal utility 264
environmental initiatives targeted at children 246
High Speed Rail projects 149
notional values in road planning 74
Plan, Le 7
social discount rate (SDR) 280, 291
value of statistical life 222
see also cost-benefit analysis of transport projects in France
Frisch, R. 264, 287
FRR/c (rate of return on total costs) 9
FRR/k (rate of return on capital) 9
funding-gap method
affordability and sustainability in 2007–13 programming period 59–61
resource allocation 52, 53, 55–9
future marginal utility, and social time preference (STP) 259, 260–61, 268
future risk 201
game theoretic approaches, to shadow price selection 18, 19
Gardiner, K. 262–3, 265, 286, 289, 309
general equilibrium impacts, and ERR calculation 72
Germany 149, 246, 280, 291
Glaister, S. 295
global change, and development evaluation 119–21
government
cost of capital 253, 266
cost of risk 255
long-term government bond rate 280, 281, 291
market functioning-institutions, laws and policies 90–92, 95
revealed social values 286, 288–91, 292, 315, 317
Green Book 7, 12
growth 38, 49
growth of per capita income, and social time preference valuation 259, 265
growth of per capita real consumption, and social time preference valuation 282, 284–5, 292
guidance
environmental evaluation 198, 199, 204
Guide to Cost–Benefit Analysis of Investment Projects (EC) 7, 9, 12, 38–9, 54, 276
Impact Assessment Guidelines (EC) 232
Railpag guidelines (Rail Project Assessment Guidelines) 76–7, 78, 79

Guide to Cost–Benefit Analysis of Investment Projects (EC) 7, 9, 12, 38–9, 54, 276

Hammitt, J. K. 225
Hayek, F. A. von 86, 261
hazard rate, and value of statistical life 212, 213–14, 215, 216, 217, 218, 219, 224
health 225, 239–40, 241
see also children’s health in environmental policymaking
hedonic pricing method, in environmental evaluation 193–4
High Speed Rail (HSR) projects
demand uncertainty and incentives 148–60, 161
economic evaluation: basic model 144–7
value for money 138
Hirshleifer, J. 255
HM Treasury 280, 281, 282, 283–4, 286, 305, 307, 308, 317

Impact Assessment Guidelines (EC) 232
incentive-based CBA 5
incentive contracts 27, 28, 29, 30, 137
incentive theory 6, 39–40
incentives
and co-financing contracts 32
design 10
and EU infrastructure investment 37
and funding-gap method 60
High Speed Rail projects 148–60
and principal-agent framework 27, 28, 29, 30, 31
and project return benchmarks 32–4, 40–41
income, and value of statistical life 216, 217, 218, 219, 220–21, 224, 230–31
income classes, and welfare weights 302, 303
income distribution 114, 296–7
see also diminishing marginal utility of income; income redistribution

income elasticities of demand 197, 264
income elasticity of WTP 197, 199
income per capita see per capita income; per capita real income; per capita regional income
income redistribution
Southeastern Anatolian Project, Turkey 296
taxation and subsidies 295
welfare weights 296, 298–300, 301–2, 307, 308
income tax 262–3, 265, 289–91, 297, 303, 315, 317
incomplete contracts 124
indirect taxes 72, 290
individual preferences 13
individual utility, and regional welfare weights 298, 299, 300
inequality 296, 309–10
information
in DS framework 14, 20–21, 22
environmental evaluation data 199, 201, 202, 204
High Speed Rail projects 148–60
planners and shadow price estimation 14, 20–21, 22, 23, 41
principal-agent framework 27, 29, 31, 32
shadow price for evaluators 39, 41
see also asymmetric information; ex-ante information; ex-post information; guidance; knowledge-sharing; market information
infrastructure, policy reforms 110–11, 131
infrastructure construction costs 145, 146, 148, 149, 153, 160, 161
infrastructure investment projects
and asymmetric information 138–44, 148
Cohesion Policy Budget 2007–2013 period 1, 2–3
common EU planning and evaluation framework 37
and growth 38
priorities 110, 111, 126
project returns 7–8
and Structural Fund management 127–30, 303, 304
transition impact methodology example 102–4
see also cost-benefit analysis of transport projects in France; High Speed Rail projects; large scale infrastructure projects; urban transport projects; water and wastewater infrastructure projects
infrastructure project costs 26–7, 28, 29, 31
infrastructure sector 109–11
Inglađa, V. 138
innovation 93–4, 95, 111
institutions, and transition impact criteria 91, 95
Instrument for Pre-accession Assistance(IPA) 59
Instrument for Structural Policies for Pre-Accession (ISPA) 68–9
intergenerational equity 297, 299
Intergovernmental Panel on Climate Change 260–61
Internal Rate of Return (IRR), and CBA of transport projects in France 171, 186–7
intuition, and elasticity of marginal utility 264–5
investment costs funding-gap method 58, 59, 60
High Speed Rail Projects 140, 141, 142, 143, 145, 148, 149, 151–3, 154–9
see also discounted investment cost (DIC)
Ireland 284
Italy 149, 222
Japan 222, 244
Jaspers (Joint Assistance for Preparing Projects in European Regions) 55, 80–81
Jensen, Michael C. 255
Jensen, Peter 181
Jeremie (Joint European Resources for Micro to Medium Enterprises) 81
Jessica (Joint European Support for Sustainable Investment in City Areas) 81
job creation 8, 296, 300, 302
Johannesson, M. 214, 222
Johannsson, Per-Olov 8, 211, 213, 214, 215, 216–17, 218, 219
Jones-Lee, M. W. 209, 210–11, 222
Kahneman, D. 196
Kaldor-Hicks compensation criterion 295
Kirman, A. 255
Kirzner, Israel 86–7
Knetsch, J. 196
Kniesner, T. J. 222, 223
knowledge-based innovation 111
knowledge-sharing 74
Kopp, R. J. 260–61
Krupnick, A. 199
Kula, Erhun 8, 9, 261, 264, 282, 283, 287, 288, 303, 307, 308, 309
labour market studies, and value of statistical life 220–21, 222
Laffont, Jean-Jacques 6, 11, 25, 27, 40
Lagrange function, in DS framework 19–20
large scale infrastructure projects 55, 138–44, 160, 296
see also cost-benefit analysis of transport projects in France; High Speed Rail projects; water and wastewater infrastructure projects
large scale projects 69, 70
see also large scale infrastructure projects; major projects
Laure, André 180
Layard, R. 295
leasing 266–7
legislation 92, 95, 243–5
Levinson, D. 138
lexicographic approaches, to shadow price selection 18, 19
life chance 283, 284
life-cycle models of value of statistical life 212–17, 223–4, 230–31
life expectancy, in value of statistical life 216
life insurance, in value of statistical life 211, 216–17, 219, 224, 230–31
time consumption 285–8
Lind, R. C. 255, 256–7, 266–8
Little, Ian M. D. 4, 22, 23, 83, 264–5, 283
Little-Mirrlees rules 22
loans, European Investment Bank 65–7, 72, 73
local governments, in DS framework 15
long-term government bond rate, and social discount rate 280, 281, 291
low-powered contracts 29, 40, 137
LT framework, and principal-agent framework 25–31, 40

macro-econometric modelling, infrastructure returns 7–8
macro-economic policy, and development 115–16
maintenance costs 144, 145, 146, 148–9, 160, 161
Mairate, Andrea 50
major projects 52, 53, 80
see also large scale infrastructure projects; large scale projects management 110, 111, 127–30, 303, 304
marginal product of capital, and social discount rate (SDR) 280
marginal utility 259–60, 299, 301, 302, 309, 311, 312
Marglin, S. A. 83, 256, 259, 261
market competition 88–9, 95, 175
market fundamentalism, and development assistance 115–16
market information 188, 192–3
market prices 302
market shocks 286
markets, in transition impact criteria 88–9, 90–91, 95
Marshall, Alfred 87
Matouschek, Niko 89, 106
Maurice, Joel 186
McConnell, K. 198
McNamara, Robert S. 112–13
Mera, K. 263
meta-analysis, and value of statistical life 220–22
Michelbach, P. A. 262
migrants 296, 302
millennium development goals 117, 119
Miller, T. R. 222
Ministry of Transport (France) directives 164, 165–77

Mirrlees, James A. 4, 22, 23, 83, 264–5, 283
Mises, L. von 86
Mishan, E. 303
monetary costs 193
monetary values, and CBA of transport projects in France 166
monitoring benchmarks 103, 104, 105
moral hazard 25–31, 40, 123–4, 138
see also corruption
morality see ethics
mortality risk 261, 283, 284
Mrozek, J. R. 220–21, 222
Muellbauer, J. 287
Myers, C. Stewart 255

Nash, C. A. 138
National Strategic Reference Frameworks (NSRF) 52
neo-liberalism 115–16
net present value (NPV)
  cost-benefit analysis of transport projects in France 171, 183–7
  High Speed Rail projects 140, 144, 150–53, 154–9
net present value per Euro (NPV/E), and CBA of transport projects in France 171, 174, 186–7
net social value, High Speed Rail projects 140, 142, 143, 161
Netherlands 149, 238, 239
new institutional economics, and development evaluation 123–5
New Zealand 240, 241, 244, 245
no-incentive low-powered contracts 29, 40, 137
noise-related policies 245
noise values 166–7, 193, 194
nominal discount rate 260
non-use values 190–91, 194–8
Nordhaus, W. D. 266
notional value of time 73–4
objective function
  in DS framework 14–15, 17, 18–20
  European Commission 51–2
infrastructure investment and asymmetric information 139–44
observed prices 11–12, 13, 21
OECD countries
CBA, use in environmental policymaking in 238–9
economic evaluation tools for policymaking 236–8
environmental legislation and initiatives targeted at children 243–5
social discounting practices 276–9
operating costs 144, 145, 146, 148–9, 153, 161
operational programmes 52
opportunism see moral hazard
opportunity costs 30, 114, 123, 160, 302
optimal distribution, and CBA of transport projects in France 175
optimal policies, in DS framework 17, 21
optimal production plans, in DS framework 17
optimization tools, in project design 71
option theory, in development evaluation 124
option value, in total economic valuation 190
ordinal utility 299
Pareto criterion 295, 299–300
Pearce, D. W. 190, 191, 282–3, 286, 297, 302–3
per capita consumption, and welfare weights 301
per capita income 129–30, 131, 199
per capita real income 304
per capita regional income 309, 311–13, 316, 317
Percoco, M. 287, 288, 289
performance indicators, in financial analysis 9–10
personal risk aversion 263–4
personal savings, and elasticity of marginal utility 263
personal tax 262–3, 265
Pigou, Arthur C. 10, 260, 282
Plan, Le 7
planned use value, in total economic valuation 189–90
planners
in Barone-Lange-Taylor framework 14, 22
in DS framework 14–15, 17–18, 19–21, 22
and information for shadow price calculation 14, 20–21, 22, 23, 39, 41
uncertainty in shadow price estimation 23–4
planning, in DS framework 15–19
policies
and CBA 71
development cooperation 120–22
in DS framework 14–15, 16, 17, 21
environmental, targeted at children 243–4, 245, 246
see also children’s health in environmental policymaking
environmental policy valuation 239–40, 241
income classes and distributional weights 302
infrastructure 110–11, 131
macro-economic development policy 115–16
market functioning 90–91, 95
see also policymaking
policy valuation, in environmental policymaking 239–40, 241
policymaking
CBA in environmental policymaking 238–9
economic evaluation tools compared 233–6
economic evaluation tools in OECD countries 236–8
see also children’s health in environmental policymaking
Portney, Paul R. 260–61, 265–6
Portugal 304, 305
potential rating, in transition impact methodology 96–7, 98–9, 100–102, 103, 105
poverty, and welfare weights 296, 299, 300, 302, 303, 304–5
poverty reduction, development policies 117, 119–20, 127
Pozmantir, Wladimir 181
price elasticities of demand 264, 265, 287–8
prices 260
Index

see also accounting prices; market prices; observed prices; price elasticities of demand; shadow prices
pricing policies, and infrastructure 110, 111, 113
principal-agent framework
example 25–30
and financial risk management 123–4
and incentive contracts 27, 28, 29, 30, 137
in LT setting 30–31, 40
private financing, versus public financing of public services 266–7, 269
private firms
cost of risk 255
discount rate 253
in DS framework 13
and infrastructure policy reform 111, 129, 131
principal-agent framework 26–7, 28, 31–2
see also Public-Private Partnerships (PPPs)
private investment, and social discount rate (SDR) 256–7, 258
privatization 90, 95
see also Public-Private Partnerships (PPPs)
process innovation, and transition impact criteria 93, 95
product innovation, and transition impact criteria 93, 95
production function, and total economic valuation 191
production plans, in DS framework 16, 17
profit maximization 13, 31–2
profitability 59, 74, 93, 148, 153, 160, 161, 171
project and programme assessment at European Investment Bank
CBA applied to programmes and projects 69–70, 72–4
CBA urban transport example 74–6
Railpag guidelines (Rail Project Assessment Guidelines) 76–7, 78, 79
Value Added (VA) assessment 70–74
project costs 59
project evaluation
and co-financing contracts 30–32
in DS framework 18–19
and observed prices 11–12
origins of discipline 112
real world agenda 7
and risk and uncertainty 121–2
see also development evaluation; economic evaluation; environmental evaluation; ex-ante evaluation; ex-post evaluation
project return benchmarks 32–5, 40–41, 55
project returns 7–8, 10
projects
design 71
and EIB in 2007–13 period 77–8, 80–81
and EIB loans in 2000–2005 period 66–7
quality 55, 70–71, 80–81
and social welfare distribution 9
see also cost-benefit analysis of transport projects in France; High Speed Rail projects; infrastructure investment projects; large scale infrastructure projects; large scale projects; major projects; project and programme assessment at European Investment Bank; suboptimal projects; urban transport projects; water and wastewater infrastructure projects
public expenditure, and social discount rate 258–9
public firms 13–14, 26–7, 28, 31–2
see also Public-Private Partnerships (PPPs)
public fund budget constraints, and CBA of transport projects in France 174, 183–4, 185, 186–7
public funding 266–7, 269, 296
public investment, and social discount rate 256–7, 258
public investment planning and evaluation theory 10–12
see also DS framework
Public-Private Partnerships (PPPs) 73, 81, 129, 178
public production plans, in DS framework 16
public sector borrowing requirement (PSBR) 280
public services, private financing versus public financing 266–7, 269
pure time preference rate 259, 260–61, 266, 282–4
Quality Adjusted Life Year (QALY) 225, 260, 266
quality of projects 55, 70–71, 80–81
Quinet, Emile 8, 174, 184, 186
radiation-related legislation 244–5
Railpag guidelines (Rail Project Assessment Guidelines) (EIB) 76–7, 78, 79
Ramsey, F. P. 260, 261, 282
rate of return on capital (FRR/k) 9
rate of return on total costs (FRR/c) 9
rates of return, European Investment Bank 72, 73
Rawls, John 296, 310
Ready, R. 202
real discount rate 260
real income per capita, and welfare weights 304
redistribution 9, 49
see also income redistribution
regional benefits, and ERR calculation 72
regional development aid 300
regional development projects and programmes 65, 68, 129–30, 300
regional evaluator, and principal-agent framework 25, 28, 31
regional governments
in DS framework 14, 15, 18, 19, 20
in principal-agent framework 27, 28, 29, 31
regional income 299, 300, 302
see also per capita regional income
regional regulator, and principal-agent framework 25, 27–8, 29, 30
regional utility, and regional welfare weights 299, 300, 308
regional welfare weights
and average marginal utility 310, 315–16, 317
and diminishing marginal utility of income 298–300
and elasticity of marginal utility of income 304, 305, 307, 308
and equally distributed income equivalent 308, 310, 313–15, 316, 317
estimation based on Turkish data 311–16, 317
model 300–2
and per-capita regional income 309, 311–13, 316, 317
and resource allocation 303–4, 305–6
Southeastern Anatolian Project, Turkey 296
theoretical considerations 308–11
and total utility 298, 299
regulations, food safety 245
regulatory bodies, and transition impact criteria 91, 95
regulatory impact assessment (RIA) 236, 237, 238
reliability 54, 115, 197–8
rents, and principal-agent framework 26–7, 29
replication, in transition impact criteria 93–4, 95
reputation bonuses, for evaluators 32
research agenda 6–10
resource allocation
CBA importance 52–3
CBA problems 53–4
Cohesion Fund 51–4
and corruption 128–9
funding-gap method 52, 53, 55–9
in 2007-13 programming period 59–61
Instrument for Pre-accession Assistance 59
and per-capita income 129–30, 131
and regional welfare weights 303–4, 305–6
structural funds 51–4, 303–4
resources, for infrastructure 110
restructuring, in transition impact criteria 93–4, 95
revealed preference methods (RPMs) 191, 192–4, 197
revealed social values of governments 286, 288–91, 292, 315, 317
rights, and contracts 123
risk adult and child health differences 242
and evaluation 121–2
research agenda 10
in value of statistical life 210, 215, 219, 220, 221, 224, 225
see also catastrophe risk; cost of risk; financial risk management; future risk; mortality risk; personal risk aversion; risk analysis; risk rating; risk reduction; systematic risk costs; uncertainty
Risk & Policy Analysts (RPA) 239
risk analysis 73, 114, 121, 122, 172–4, 175
risk rating 96, 97, 99–102, 103, 105
risk reduction adult and child health valuation differences 242
and development policies 121
and value of statistical life 210–11, 215, 217, 219, 221
road planning 74
road transport 280
Rome Treaty 68
Rosen, S. 210, 211, 213, 214, 215, 217, 225
Russell, C. 192

Sauvant, Alain 186
SCALE initiative 245, 246
Scapecchi, Pascale 8, 242
Schelling, T. C. 260, 265, 266
Schumpeter, Joseph 87
scope effects 196–7, 221
Scott, M. F. G. 264–5, 282
seat belt legislation 243–4
sector linkages, in transition impact criteria 88–9, 95
security 110, 121
Sezer, Haluk 261, 263, 264, 283, 284, 286, 287, 288, 289, 303, 311, 315

shadow prices calculation 16–21
critical shadow prices 8–9
defined 11, 12, 16–17
and ERR calculation by European Investment Bank 72
estimation 12
evaluation 17–19
importance 39
information for evaluators 39, 41
information for planners 20–21, 22, 23, 39
and principal-agent framework 26, 29, 30, 31
rules, in DS framework 19–22
and social discount rate 23, 256, 258, 268, 269
in travel cost revealed preference method 193
uncertainty for evaluators 24
uncertainty for planners 23–4
and welfare weights 302
shadow wages 8, 55
Shepard, D. S. 209, 213, 214–15, 217, 222, 225
signals in DS framework 13–14, 15, 16, 19
in resource allocation in programming cycle 52, 53
skill transfer and dispersion, in transition impact criteria 92, 95
Slovakia 304, 305
Smith, V. K. 197, 217, 222–3
social and economic cohesion, and EIB 68
social benefits, High Speed Rail Projects 140, 141, 142, 143–4, 145, 146
social costs High Speed Rail Projects 140, 141, 142, 143
of public expenditure 258–9
social discount rate (SDR) and CBA of transport projects in France 172–4
discounting practices in OECD countries 276–9
Efficient Market Hypothesis (EMH) and cost of risk 254–5, 268–9
EU member states 280–81, 291–2
European Commission 258, 276, 280, 281, 292
long-term 265–6, 269
and long-term government bond rate 281, 291
number of, research agenda for 8
practical application 267–8
principles 268–9
and public versus private financing of public services 266–7, 269
and shadow prices 23, 256, 258, 268, 269
social opportunity cost and social cost of public expenditure 256–9, 268, 269
social time preference rate see social time preference rate (STPR)
social net project value, and principal-agent framework 30
social opportunity cost (SOC) 256–8, 269, 268, 269, 276
social opportunity cost/social time preference weighted discount rate 256–8, 268, 269
social profitability 148, 153, 160, 161
social time preference rate (STPR) described 259–60
and elasticity of marginal utility of consumption 282, 285–91, 292
and elasticity of marginal utility of income 262–5, 268
equation 259–60, 282
EU member states 280, 281, 291
and growth of per capita income 259, 265
and growth of per capita real consumption 282, 284–5, 292
importance 268, 269, 276
pure time preference 259, 260–61, 266, 282–4
and real and nominal discount rates 260
and social opportunity cost (SOC) 256–8, 269
and utility discount rate 260, 282–4, 292
social value of job creation 8
social values, of governments 286, 288–91, 292, 315, 317
social welfare 9, 114, 139–44
see also welfare weights
social welfare function and DS framework 17, 18–20, 21
and principal-agent framework 25, 27–8, 29, 31
and regional welfare weights 298, 299–300, 308, 309
social welfare maximization 13, 302
social welfare optimization 14, 25
sound banking 85
South Korea 222
Southeastern Anatolian Project, Turkey 296
Spackman, Michael 280, 281, 286, 291
Spain 138, 149, 304, 305
specialist knowledge sharing 74
Stakeholder/Effects (SE) Matrix 77, 79
standard setting, in transition impact criteria 94, 95
standardized valuations, and CBA of transport projects in France 166–9
stated preference methods 191, 193, 194–8
see also choice modelling (CM); conjoint analysis; contingent valuation (CV); willingness to pay (WTP)
Stear Davies Gleave 149
Stern, Nicholas 6, 11, 13, 22, 263, 264–5, 283, 286, 287, 289, 309
see also DS framework
Stigler, G. 297
Strand, J. 225
strategic decisions 71
Structural and Cohesion Fund Regulations 70
structural funds
2007–2013 period 59–61
and CBA 38–9, 54–5
co-financing mechanisms 34–6
and development evaluation 125–7
and European Investment Bank 68
institutional setting 50–51
investment priorities 110, 126
management 127–30, 303, 304
origins and purpose 68, 109, 112, 137
resource allocation in programming cycle 51–4
funding-gap method 52, 53, 55–9
funding-gap method in 2007–13 period 59–61 and welfare weights 303, 304 subjective judgements, welfare weights 300, 303 suboptimal projects 69–70 subsidies, income redistribution 295 sunk costs 138, 144, 148 supra-national planners, and principal-agent framework 25, 27–8, 29 surplus calculation, and CBA of transport projects in France 165, 169–70, 171, 174, 176, 177, 181–2 sustainability, and funding-gap method 60–61 Sweden 222 systematic risk costs 254, 255 Tamburlini, Giorgio 242 tax-payers, and principal-agent framework 26, 27 taxation 14, 258–9, 286, 292, 295 see also fiscal constraints; income tax; indirect taxes; personal tax Taylor, L. O. 220–221, 222 technical assistance (TA) 55, 78, 80–81 technology, and principal-agent framework 26, 28, 29, 30 test-retest reliability 198 Thaler, R. 196 time, value of see value of time time costs 169, 193 time savings, High Speed Rail projects 144, 145, 146, 149–50, 153, 154–9, 161 Tirole, Jean 6, 11, 40 tobacco smoke-related legislation 244 total economic valuation 189–91 total economic value (TEV) 189–91 total utility, and regional welfare weights 298, 299 traffic growth forecasts, and CBA of transport projects in France 172, 174 traffic infrastructure programming method 180–87 traffic-related policies 243–4 Trans-European Networks policy 37 transaction costs 89 transition impact, in EBRD eligibility criteria 85 transition impact methodology advantages 105 criteria demonstration of new replicable behaviour and activities 93–4, 95 expansion of competitive interactions in other markets 88–9, 95 increased competition in project sector 88, 95 institutions, laws and policies promoting market functioning and efficiency 90–92, 95 private ownership increase 90, 95 setting standards for corporate governance and business conduct 94, 95 transfer and dispersion of skills 92, 95 dimensions project contributions to institutions and policies that support markets 89–92, 95 project contributions to market-based conduct, skills and innovation 92–4, 95 project contributions to structure and extent of markets 87–9, 95 example 102–4 intellectual origins 86–7 limitations 106 project ratings potential rating 96–7, 98–9, 100–102, 103, 105 risk rating 96, 97, 99–102, 103, 105 Transparency International 128 transportation 110–11 see also cost-benefit analysis of transport projects in France; High Speed Rail projects; road planning; road transport; travel cost revealed preference method; urban transport projects
travel cost revealed preference method 192–3, 194
Turkey 296, 311–16, 317
Tweeten, C. 301, 309

UK
benefits transfer 201, 202
CBA in policymaking 236, 238–9
elasticity of marginal utility of income 262–3, 264, 265
Green Book 7, 12
growth of per capita real consumption 284
income tax 262–3, 265, 289–90
market shocks 286
regional development boards 300
regional resource allocation 305
social discount rate 280, 291
social opportunity cost discount rate 259
stated preference study guidelines 198, 199
utility discount rate 283–4
value of statistical life 222
Ulph, D. 282–3, 286

uncertainty
and CBA 114, 115
and evaluation 121–2
and incomplete contracts 124
long-term social discount rate (SDR) 265–6
and risk management 123
in shadow prices estimation 23–4
unemployment 8
United Nations 117, 258
Universities Research Action Plan (EIB) 81
upstream supplier linkages, in transition impact criteria 88–9, 95
urban transport projects 74–6

US
benefits transfer 199, 201
CBA in policymaking 236, 238–9
Circular A-94 7, 12
elasticity of marginal utility 263–4, 265
environmental legislation and initiatives targeted at children 243, 244, 245, 246
health impact valuation 240, 241
High Speed Rail projects 138
social cost of public expenditure 259
stated preference study guidelines 198, 199
and value of statistical life 220–21, 222
use values 189–91, 192–4
user’s surplus 169–70, 171, 174, 176, 177
utility
and regional welfare weights 298–9
and value of statistical life 209–10, 211, 212–13, 215, 216, 217
and welfare weights 298
utility discount rate 260, 282–4, 292
utility maximization
and principal-agent framework 26
and value of statistical life 209, 212, 216, 224, 230–31
validity 196–7, 201–2
Value Added (VA) 70–74, 103–4, 138
value for money 138
value of human life, and CBA of transport projects in France 166, 167
value of statistical life (VSL/VSL)
age-dependency 217–19, 222–3, 224–5, 231
and benefits transfer 201
bequest motives 211, 224, 225
and children’s health 240, 241
see also children’s health in environmental policymaking concept 208
empirical evidence 219–23
in environmental policymaking 240, 241
life-cycle model with life insurance 216–17, 224, 230–31
life-cycle model without life insurance 212–15, 223–4
practical problems 224
Quality Adjusted Life Years 225
single-period case 209–12, 223–4
value of time 150, 153, 160, 161, 166, 167–70
VAT 72
vector optimization, and shadow price selection 18, 19
Index

Venables, Anthony 89, 106
Vignetti, S. 9, 10
Viscusi, W. Kip 221, 223
Vodosnabdiavane i Kanalizicia Burgas (VBK) 102–4

Wadhwani, S. B. 255
wage rates 193, 221
Washington consensus 115
water and wastewater infrastructure projects 102–4, 296
wealth, in value of statistical life 210–11, 212, 213, 215, 216, 217
Weisbrod, Burton A. 307, 308
welfare weights
concept 297–8
and diminishing marginal utility of income 297–300, 302, 303, 307
and elasticity of marginal utility of consumption 301, 307
and elasticity of marginal utility of income 304, 305, 307
and ethics 303
and income classes 302
and income redistribution 296, 298–300, 301–2, 307, 308
model 300–302
and subjective judgement of deservedness 300, 303
uses 303–5
see also regional welfare weights; social welfare; social welfare function
Weyant, John P. 266
WHO 245, 246
willingness to accept (WTA) 189, 191, 194
willingness to pay (WTP)
and adult and child health differences 242
and cost-benefit analysis of transport projects in France 166
and environmental evaluation methods 194, 197, 198, 199–200, 202, 205
for High Speed Rail Projects 146, 150, 160, 161
and total economic value 189, 191
and value of statistical life 210, 211, 215, 217, 219, 220–221, 222, 224, 225
World Bank 4, 22, 112–13, 116, 117, 202, 258

Zeckhauser, R. J. 209, 213, 214–15, 217, 222, 225