

Index

absolute standard, 48, 49, 172

abstract principle, 38, 43, 47, 53, 72, 88,

153, 167, 218 accuracy. See also precision definition, 73 of instruments, 79 of measurements, 15, 45, 55, 70, 73, 122, 152, 219 Adams, John Quincy, 65 Alder, Ken, 5, 56 ambiguity, 32, 131, 150 anthropocentric measures, 31, 66 arbitration, 25, 84, 166, 212 Argentina, 175 artefact, 39, 43, 78, 88, 108, 119 assizes, 35, 40, 76, 197 Associated Chambers of Commerce, 156 Australia, 64, 175 bakers, 35, 176, 186 Barzel, Yoram, 72 Beveridge, William, 74 BIPM or Bureau International des Poids et Mesures, 83 Bird, John, 42 Birmingham, 138, 147 Birmingham Chamber of Commerce, 155 Birmingham wire gauge. See wire gauges Board of Trade, 52, 156-157, 167, 194 Standards Department, 136, 166 Boumans, Marcel, 73, 219 bread, 35, 76, 176, 181, 185, 191, 195, 199 Buddle, John, 113, 121 bushel, 32, 35, 48, 53, 74, 77, 108-110, 113, 124, 184, 189, 203, 204, 205,

206. See also measurement, units

Canada, 64, 147, 180
capacity, 43, 46, 65, 138, 161. See also
volume measures

Carysfort Committee, 42, 51. See also parliamentary committee Carysfort, Lord, 42, 48 caveat emptor, 23, 167, 220 cental, 59, 207 centralisation, 9, 46, 84, 201 chaldron, 32, 107, 125 Chamberlain, Joseph, 167, 227 Chicago, 180 Chicago Board of Trade, 187, 189 Clark, Latimer, 149, 152 classification, 22, 32, 81, 187, 219 coal. bushel, 108 measurements, 114, 221 trade, 101, 115 coastal shipping, 100 Cobden-Chevalier treaty, 63 colliers, 103, 105, 108, 117 commodity exchange, 187, 208, 209. See also industry association competition, 56, 86, 119, 159, 162, 199 conformity, 21, 46, 74, 155, 182 consistency, 34, 74, 110, 154, 183, 197, 205, 232 context, 31, 34, 74, 91, 207 contextualising, 76 decontextualise, 38 contracts, 39, 62, 149, 185, 195 Convention du Mètre, 57 conventions, 34, 55, 68, 74, 79, 90 cooperation, 57, 165 Corporation of London, 106

debates, 23, 58, 155–159, 206 decimal division, 51, 57, 59, 152 decimal measures, 55, 58, 153. See also cental; metre (measurement unit) density. See specific gravity, wheat

259



260 Index

Desrosières, Alain, 68 Leeds, 156, 185, 194 distinction, 22, 82, 181, 183 Levi, Leone, 58 diversity. See uniformity, diversity liability, 23, 133 Durham, 100, 185 linear measures, 32, 43 Liverpool, 33, 194 electrical resistance, 64, 84 lock-in effects, 87. See also inertia; enforcement, 19, 36, 51, 116, 135, 158 interrelatedness engineering, 59, 137, 151, 157 London, 44, 100, 157, 177, 186 engineers, 124, 145, 155 equivalency, 32, 35, 41, 75, 109, 129, Manchester, 138 205 markets coordination, 80, 83, 129, 159, factors, 104, 178 215 facts, 6, 27, 173 integration, 55 fraud, 24, 51, 120, 128 norms, 9, 33. See also conventions measurement fraud, 110 measurement attributes, 8, 72, 172, 190 Germany, 58, 142 bias, 73. See also accuracy; precision Gooday, Graeme, 5, 69 costs, 72, 130, 209, 214 instruments, 14, 49, 59, 74, 78, 109, Halifax, 138 128, 200, 214. See also wire, gauges; heaping, heaped measures, 34, 110, 116, accuracy; precision 128, 203 practices, 52, 65, 69, 78, 89, 126, 169, Herschel, William, 49, 62 Holtzapffel, Charles, 151 protocols, 79, 109, 169, 201, 211 reliability, 12, 69, 77, 114, 128, 147, Imperial measures, 12, 38, 63, 78, 126, 186, 207 standards, 45, 75, 80, 109, 116, 150, inches, 40, 43, 59, 79, 111, 147, 154 154, 166 technology, 78, 169 India, 64, 175 industry association, 163, 193. See also tools, 80, 128 units, 31, 54 commodity exchange industry structure, 100, 137, 175 measurer, 71, 232 inertia, 87, 99, 128, 137 mensuration information asymmetry, 7, 24, 75, 149 definition, 5 institutions, 17, 37, 47, 77, 80, 105, 180, process, 71 192. See also conventions; industry merchants, 36, 54, 72, 82, 104, 131, 153, association; commodity exchange 180 institutional change, 90, 126 metage system, 106, 126 instruments. See measurement, meter (measurer). See metage system instruments meters (instruments), 14. See also interchangeable, 21, 136, 153, 166, measurement, instruments metre (measurement unit), 55, 218 international trade, 62, 180 61 interrelatedness, 87, 143, 214. See also metric system, 54, 64, 150 inertia international acceptance, 57 Iron and Steel Wire Manufacturers resistance to, 56, 58 Association, 157 metrology Italy, 58 definition, 5 reforms, 38, 54 Kelly, Patrick, 1, 49 middlemen, 103, 177 Kula, Witold, 7, 29, 55 Midlands, 100, 137 Miller, John Riggs, 48 Lancashire, 33, 119, 137 millers, 197 Latour, Bruno, 6, 47 milling, 191



Index 261

```
natural weight. See specific gravity, wheat
                                               short measure, 24, 106
negotiation, 69, 83, 158, 212
                                               Shucksburg, George, 42
networks, 18, 62, 195, 227
                                               SI units. See metric system
  network effects, 84. See also lock-in
                                               Society of Telegraph Engineers, 155
    effects; inertia
                                               specific gravity
Newcastle, 100, 185
                                                 coal, 113
                                                 water, 43
objectivity, 47, 88, 137
                                                 wheat, 183, 195
obligatory standards, 11, 51, 84, 194. See
                                               standard switching, 87
    also voluntary standards
                                               standardisation clubs, 86
observation, 71
                                               standards coalitions, 86
opportunism, 24, 37, 84, 210, 220. See
                                               Stockton, 33, 120, 185
                                               Stubs, Peter, 137, 147
    also information asymmetry
                                               summary criteria, 187
Paris, 54, 186
parliamentary committee
                                               taxation, 42, 46, 114, 126, 205
  coal, 115
                                               technology, 129, 130, 137, 145, 185, 192,
  industry, 166
                                                   214
  reports, 42, 121
                                               telegraph cable, 64, 154
  weights and measures, 42, 49
                                               telegraph wire, 138
  wheat, 205
                                               test weight. See specific gravity, wheat
parliamentary debate, 58, 121. See also
                                               tons, 33, 125
     debates
                                               traceability, 11, 51, 66
path dependence, 85, 99, 135
                                               trade associations, 19, 168, 180, 187, 210,
political economy, 97
                                                   221
politics, 25, 54, 89, 167
                                               transaction costs, 82, 150, 163. See also
Pollard, Sidney, 5, 99
                                                   measurement, costs
Port of London, 104
                                               transparency, 97, 212
Porter, Ted, 13, 73
                                               Troughton, Edward, 42
precision, 59, 91, 166. See also accuracy
                                               true value, 73, 90, 219
  definition, 73
                                               trust, 13, 55, 69, 73, 114, 209
  instruments, 42, 79
product standards, 80
                                               uniformity, 41, 75, 155, 168, 190
                                                 diversity, 9, 51, 81, 149
protocols. See measurement, protocols
public goods, 81, 216
                                               United States, 59, 65, 147, 175
public measurements. See metage system
                                               universal, universality, 54, 61, 93, 219
quality
                                               value chain, 98, 182
                                               variability, 36, 66, 75, 111, 128, 204
  coal, 112, 124
  grades, 187
                                                 invariability, 45, 56, 109
  standards, 69, 172
                                               verification, 9, 53, 146
  wheat, 182, 195
                                               volume measures, 32, 107, 117, 128,
  wire, 143, 162
                                                    205
quantification, 23, 46, 99, 136, 190
                                               voluntary standards, 83, 158
quantity, 61, 68, 98, 175
                                               Warrington, 138, 147
railways, 22, 85, 100, 120, 161, 186
                                               weight measures, 32, 59, 75, 107, 128,
rhetoric, 12, 47, 54, 133, 206
                                                   201
Royal Society, 42
                                               weights and measures
Russia, 15, 57, 175
                                                 diversity, 31, 107, 204
                                                 legislation, 52
scientists, 14, 46, 54
                                                 reforms, 39, 54
                                               wheat
Sheffield, 36, 140
shipping, 131, 210. See also coastal
                                                 grading of, 187
    shipping
                                                 international trade, 180
```



262 Index

Whitworth, Joseph, 58, 151 wire gauges, 146 manufacturing, 138 sizes, 143 yards (measurement unit), 31, 42, 48 yarns (textile), 74 Yorkshire, 120, 137

Zupko, Ronald, 52, 54