## Index

accountants' statements of assets, 79 accounting profit rates, diagnostic test for monopoly power, xii–xiii, 79– 137	see also television network antitrust damages in price-fixing cases, use of multiple regression in legal proceedings, 429–33
accounting rates of return, 17–18	Apollo, airline computer reservation
after-tax accounting, 87, 88, 89, 90, 91	system, 66
after-tax analysis, 98-100	aptitude test scores, 428
average for firm, before-tax analysis,	Areeda, P., 139–40, 143, 144
94-6	Arrow, K.J., 173
depreciation, 85–6	assets
depreciation schedules, 81, 101	valuation, 106
end-of-year versus beginning-of-year	valuation for damages, 400, 401, 402
rates, 107-9	Avio, K., 347, 348
exponential growth rate, before-tax	
analysis, 96–8	Bain-Sylos model of market entry and
factors affecting, 81-2	competition, comparison with
growth rate, 82, 86–7	Cournot model, 211–16
indices of monopoly power and market	barriers to entry, 36, 42–6
performance, 79	assessment of monopoly power, 21–6
individual investments, before-tax	capital, 24–5
analysis, 91–4	definition, 43
information about economic (internal)	economic, 22–3
rate of return, xiii, 79–103	economies of scale, 43
market test of acceptance, 114	risks of introduction of new products,
misuse to infer monopoly profits, 79-103	and, 23–4
proportion of investments, 82	US-Far East air travel, in 60-2, 75
relationship to economic rate of return,	behavior, professional and unprofessional,
79-103	456-69
depreciation method used, 112	Bernheim, B.D., 197, 205–6
differences, 82-3, 84-5, 86-8	Bertrand, J., 194
O-Profile, 83, 84–5, 86–8	Beyer, J. 461
advertising, source of finance for television,	Blumstein, A., 348
236, 239, 249-50, 263, 270-88,	boosters for television signals, features, 238
448-9	Brown Shoe Company v. United States
advertising expenses, 17	(1962), 32, 35, 50-1
airlines, commission to travel agents, 63-4	to the transfer of the second states between soil
American Broadcasting Company (ABC),	cable television regulation history, xvi
271, 290, 308	see also CATVs

## Index

Canizio v. New York, 337	conduct
capital, user cost of, 118	predatory pricing, 28–31
capital intensity, effect on errors of profit—	restrictive practices, 27
sales ratio, 133–4	correlation coefficient, 423–4
Carr-Hill, R.A., 347	Corrugated Container Antitrust Litigation
CATVs (cable television), 238–45	(1979, 1980, 1985), 461–7
definition, 246–7	Cournot, A., xv, 194, 196–7, 201,
determinants of audience, 250–1	211–31
economic impact on local stations, 246–69	crime function, identifying, 349–57 feasibility, 360–76
analysis, audience–revenue	conclusion, 376–7
relationship, 249–50	multiple-crime-type, single-sanction
conclusions, 261–3	model, 374–6
effect of entry and activity, use of multiple	simultaneous relationship between
regression analysis, 407, 409	multiple crime and sanction types,
effect on viewing audience of existing	361
television stations, 240–1,	single-crime-type, multiple-sanction
246-69	model, 369-73
expansion, argument in favor of	single-crime-type, single-sanction
unregulated expansion, 241-3	models
measurement of potential off-the-air	expenditure as an identifying omitted
audience, 254–5	variable, 362
microwave relay, 239	inertia model: lagged sanctions,
program duplication, effect on audience	368-9
of CATV and study station,	models using prison cell utilization,
258-61	367-8
rate of growth (1964), 238, 247	review of restrictions used by some
regulation by FCC, non-duplication	authors
protection, 248	Avio, K. and Clarke, S., 356
relationship to pay-TV, 247, 249	Carr-Hill, R.A. and Stern, H.H., 356
restrictions imposed by FCC, 241	Ehrlich, I., 355–6
services provided, 248	simultaneous estimation procedures
signals, 239, 247 distribution costs, 247	m variables, 357–60
sources of finance, direct charge to users,	two variables, 349, 350–4, 355–7 crime and sanctions
239	deterrent impact, factors affecting results
see also television	of study, 345
Census of Manufactures, 127	lagged models of the mutual association,
Chamberlin, E., 195	377-9
Clarke, S., 347, 348	limits on punishment hypothesis, 348
Clayton Act, incipiency doctrine, 33, 34, 51	mutual affect on one another, 346,
Cobb-Douglas parameter, 124	347-9
Cohen, J., 348	resource saturation hypothesis, 347-8
collusive behavior, 205 – 6	toughening position, 348, 379
Columbia Broadcasting System, (CBS) 271,	crimes, clearance rate, 345
290, 292, 308	criminal offense, unfounded, definition,
Comanor, W.S., 174	379
community antenna television systems see	criticism of others
CATVs	illegitimate, 460–1
competition	legitimate, example, 461–7
economic theory	need for data management, 457
changing conditions, 7–9	current costs, 17
static conditions, 4–7	damage 202 405
competitive price level and market	damages, 392–405 continuing violations, 397–9, 404
definition, 39–40 competitive rate of return, measuring, 19	discounting the stream of lost profits,
computer reservation systems (CRS),	395–7, 404
biased, 65–8, 76–7	hindsight, 399–401, 403
***************************************	

rate of prejudgment interest, 393-4	383-91
treatment of tax effects, 394–5	analysis with no ethically irrelevant
valuation of asset, 400, 401, 402	variables, 384–6
data management, 456–9	analysis of non-linearities and more than
numerical accuracy, 457	one ethically irrelevant variable,
data-mining, 451–2	388-9
dealers, competitive	analysis of a single ethically irrelevant
compared with exclusive franchises,	variable, 386–8
154-71	conclusion, 390
compared with fully integrated	ethical judgments, 383
manufacture, 160-2, 165	employment discrimination, comments on
compared with monopoly dealers,	paper by A.P. Dempster, 471–80
162-6	ETSI Pipeline Project et al. v. Burlington
death penalty studies, 434–5	Northern Inc., et al., 404
demand substitutability, 10–11	exemplifying theory
Dempster, A.P., 471–80	description, xiv, 199–200 example, premature announcement,
Department of Justice 'Merger Guidelines',	200–1
xi, 38–40, 41, 42, 48, 49–50, 56, 57, 60, 75	
Department of Transportation (DOT)	uses, xv
jurisdiction over airline mergers, 71–2	Farrell, J., 201
Pacific Division Transfer Case, 71–3	Federal Communications Commission
depreciation	(FCC)
accounting rate of return, 85–6	Inquiry into the Relationship between
economic, 118	Television Broadcasting and Cable
methods, effect on errors of profit-sales	Television, 271
ratio, 134	regulation of CATVs, 241, 248
schedules, 81, 101, 118-19	signal carriage rules, 271
diagnosis of monopoly, 3-32	television broadcasting, 237
discriminant analysis, 338-40	see also Financial Interest and
dispersion, statistical measurement, 412,	Syndication Rules
441	feed ratio, 45, 52
distribution costs, 157, 158	Fellner, W., 195–6
mathematical analysis, 159-60	Financial Interest and Syndication Rules,
	290–322, 304
econometricians, role in litigation, 446–70	amendment by FCC, 294
economic rate of return, 16–17	analysis of effects, 315–20
after-tax accounting 87, 90, 91	arrangements for risk sharing of program suppliers with networks, 307
definition 80, 92 relationship to accounting rate of return,	effects of retention of rules, 310–15, 322
79–118	advertisers, 315
size of differences, 82–3, 84–5, 86–8	network programming mix, 311–12,
Economic Report of the President 1984, 127	314
economies of integration, television	networks payment for progam
network. 297. 298–300	development, 311
economies of scale,	performing artists, 313–14
barriers to entry, 43	program suppliers, 311, 312, 313–14
financial market, 173-4	television stations, affiliated and
R & D expenditure, 173-4	independent, 314–15
television, network, 297, 298-300, 321	writers, 313–14
Edgeworth, F.Y., 194	see also television
efficiencies and competitor opposition	financial market, economies of scale,
Pacific Division Transfer Case,	173-4
64-8	franchises, exclusive
efficiency 6, 20	benefits from avoiding, 155
Ehrlich, I., 347, 356	compared with competitive dealers,
Elzinga, K., 145, 146, 147, 149, 151	154-71
empirically-based sentencing guideline	analysis, 157, 158, 159–60, 162–6

franchises, exclusive (continued)	t-statistics, 419-20, 421
compared with fully integrated	see also multiple regression analysis
manufacture, analysis, 166-9	Lerner measure of monopoly power, xiii,
costs and supply curves, 156–8	115. 118–37
interbrand competition, 154	litigation costs, distribution, 394
summary of analysis results as relevant to	Livingstone, J.L., 81
antitrust, 169–70	Long, W.F., 107–14
free-market policy, 289	Eong, W.I., 107 – 14
FTC, Line-of-Business Program, 119	McAdama A.K. 452
Fudenberg D. 204 F	McAdams, A.K., 453
Fudenberg, D., 204–5	Mansfield, E., 174
nome a Alexandra	manufacture, fully intergrated
game theory	compared with competitive dealers
role in oligopoly theory, 193–210	160-2, 165
General Motors (GM), proposed joint	compared with monopoly dealers,
venture with Toyota, 46–7	166-9
generalizing theory	market, definition by Department of Justice
description, xiv, 199	'Merger Guidelines', 38, 57
role in oligopoly theory, 201–3	market concentration, Pacific Division
Grabowski, H., 174	Transfer Case, 59, 60, 75
· ,	market definition, x-ix, 9-15, 36, 37-40
Hamberg, D., 174	competitive price level, 39–40
Herfindahl—Hirschman index (HHI), xi,	demand substitutability, 10–11
41-2, 45, 56, 60	
definition, 202	Nestlé acquisition of Stouffer's, 37, 51
	Pacific Division Transfer Case, 57–9, 74
horizontal mergers, 33–53	75
efficiency argument, 46–9	purpose, 10
incipiency doctrine, 33–6	supply substitutability, $10-11$ , $12-13$
Northwest—Republic airline merger,	market entry and competition, comparison
44-6, 52	of Bain – Sylos and Cournot
Horowitz, I., 115–16	models, 211–16
Hotelling, H., 106, 118, 119–21	market performance, accounting rates of
hypotheses tests	return as index, 79
explanation, 453–6	market share, xi, 13, 15–16
use of multiple regression analysis, 408	Pacific Division Transfer Case, 59, 60, 75
, , ,	Markham, J., 174
innovation demand and supply by	Marschak, J., 194
monopoly firms, 173	
innovative industry, 7–9	Martin, S., 114
,,,,	Massachusetts Gun Law, 348
JALCOM, computer reservation systems, 67	Matsushita Elect Indus. Co. v. Zenith Radio
Japan Air Lines (JAL)	Corp. (1986), 145-53
slot allocation at Tokyo Airport (Narita),	merger analysis, 33–53, 56
62	merger policy
joint-maximization solution, 195–6, 198	barriers to entry, 42–6
Justice Department, 'Merger Guidelines'	concentration measures, 40-2
	defined, 202
see Department of Justice 'Merger	efficiencies and competitor opposition,
Guidelines'	64-8
Kort, F. xvii, 326–38, 341, 342, 343	Herfindahl—Hirschman index (HHI), xi,
	412, 45, 56, 60
Kreps, D.M., 206–7	market definition 36, 37–40
lawyers, understanding of regression	monopolies, 34
model, 439	
	oligopolies, 34–5
least squares regression, 412–15	procedure for identifying
measurement of how well model fits data	anticompetitive mergers, 36–7
correlation coefficient, 423–4	mergers see horizontal mergers
standard error of estimate, 421–3	Milgrom, P., 206–7
standard errors of coefficients and	MIT – style theory see exemplifying theory

nodels, nature of and the goodness-of-fit,	Northwest – Republic airline merger, 44–6,
452-3	52
Modigliani, F., xv, 193, 211–16	null hypothesis, 454, 455–6
nonopoly	
accounting rates of return, 79–117	oligopoly theory
definition, 9, 27, 29	development, 194–6
diagnosing, xii, 3–32	market entry and competition, Bain-Sylo
profit—sales ratio, 118—38	model compared with Cournot
Norgenstern, O., 193–4	model, 211–16
Noriarty, M., 112	primary aim, 203
Aueller, D., 174	role of game theory, 196–9, 203–7
nultiple regression analysis	role of generalizing theory, 201–3
assumptions of least squares regression, 412–15	opportunity cost, 25
behavior of the disturbance term,	
412, 414–15	Pacific Division Transfer Case, xii, 47-9,
independence of the disturbance term,	52, 53, 54–77
412–14	decision and role of the DOT, 71–3
normality of distribution, 412, 415	
erroneous inclusion or exclusion of	efficiencies and competitor opposition, less restrictive alternatives, 68–71
variables, 417–19	
estimating multiple regressions, 410, 411,	raising rivals' costs, 64–8 market definition, 57–9, 74, 75
412	
multiple independent variables, 415–17	market shares and concentration, 59, 60, 75
reasons for growth in use, 406	pre-acquisition price competition, 62–4,
uses, 407–9	75–6
forecast of values of some variable,	see also US – Far East air travel
408	Pan American to United Transfer case see
parameter estimation, 408	Pacific Division Transfer Case
testing hypotheses, 408	parameter estimation
see also least squares regression	explanation in litigation, 448–9
multiple regression analysis in legal	use of multiple regression analysis, 408
proceedings	Patell, J.M., Roman L. Weil and Mark A.
appropriate and inappropriate use,	Wolfson, 394
406-7, 424-39	patent system, 8
antitrust damages in price-fixing cases,	pay-TV, 235, 247
429–33	Pearce, D. G., Nash equilibrium, 197
conclusion, 439	performance, meaning of, 31–2
punishment as a deterrent to crime,	plaintiff damages see damages
433-9	pleas bargaining process, 346
wage discrimination, 424–5, 426,	predatory pricing, 28–31, 139–44
427-9	distinguishing from behavior competition
(2)	29–31
Nagin, D., 345-6, 348	IBM case, 139–44
Nash equilibrium, 196, 197, 198	Matsushita case, 145–53
National Association of Broadcasters	preponderance of the evidence standard,
Code, restriction on commercial	454
spots, 271	price competition, Pacific Division Transfer
National Broadcasting Company (NBC),	Case, 62-4, 75-6
271, 290, 292, 308	price fixing, use of multiple regression in
see also television, network	legal proceedings, 429–33
Nestlé, acquisition of Stouffer's, 14–15, 37,	pricing under monopoly conditions, 6
51	Pritchett, C.H., 326, 341
network television see television, network	product differentiation, economic theory,
New York Repeat Offender Law, 348	5-6
normality of distribution, least squares	professional standards and objectivity,
regression, 412, 415	conclusion, 467-9

profit—sales ratio	Saloner, G., 201
measure of monopoly power, xiii	satellite television stations, features, 238
measure of monopoly profits, 114–15	scale economies in network television
misuse to infer monopoly power,	viewing, 297, 298
118–38	Scherer, F.M., 174
exponential growth, 124–6	Schmalensee, R., 38
Hotelling valuation of capital, 118,	Schmookler, J., 174
119–21	Schumpeter, J.
regression studies, 133	Capitalism, Socialism and Democracy,
size and behavior of errors, 126–33	benefits of large firms, 172
capital intensity, 134–5	innovation demand and supply by
depreciation methods, 134	monopoly firms, 173
growth rate, 134	hypothesis for R & D, formal analysis,
risk, 134–5	172–92
stationary environment, 121–4	Selten, R., 206–7
profits	sentencing guidelines
diagnosing monopoly, 16–21	empirically-based sentencing guidelines,
effects of innovation, 7–8	383–91
misuse of accounting rates of return to	Sherman Act, section 2, 34
infer monopoly, 79–117	significance levels, 420, 453–6
ratio to stockholders's equity, 79, 100–1	Slutsky's equation, 199
ratio to stockholders s equity, 7 5, 100 -1	Solomon, E., 81
program suppliers	standard error of estimate, 421–3
arrangements for risk sharing with	standard errors of coefficients, 419–20,
networks, 307	421
distribution rights, 305–6	statistical methods
punishment as a deterrent to crime,	explanation, 448–56
345–82, 433–9	goodness-of-fit and the nature of
313-02, 133-3	models, 452–3
R&D	parameter estimation, 448–9
allocation of resources, number of	ratios, 449–50
innovations and firm size, formal	significance levels and tests of
analysis, 175–86	hypothesis, 453–6
economies of scale, 173–4	systematic v. random elements: data
expenses, 17	mining, 450–2
returns to scale. 172–87	statisticians, role in litigation, 446–70
Schumpeterian hypothesis, 172-92	Stauffer, T., 81
staff employed and firm size, 174	Stern, H.H., analysis of recorded offenses in
rate of growth, accounting rates of return,	England and Wales, 347
82	step-wise regression, 418
ratios, explanation in litigation, 449-50	supply substitutability, 10–11, 12–13
Ravenscraft, D. J., 107–14	Supreme Court decisions
Reagan, President Ronald, network	mathematical analysis, 325-44
television syndication, 296	discriminant analysis, 338–40
rents, 20–1	properties of proper method of
research and development see R & D	solution, 335–6
resource saturation hypothesis, crime,	mathematical analysis by F. Kort,
347-8	326-32
restrictive practices, 27	comments on weighting of factors, 333
risk. 19	criticism, 332–4, 336–7
effect on errors of profit – sales ratio,	perfect prediction formula, 326–31
134–5	weighting of factors, 326–31, 332
Roberts, D. J., 206–7	systematic v. random elements in regression
Robinson, J., 208	equations, explanation of
Rodriguez, C.A., 189–92	statistical method, 450-2
	·
Salamon, G., 81, 111–12	t-statistics, 419–20, 421, 453–4

television	warehousing policy, 294–6
costs of production, direct charging to	effect on independent stations,
viewers, 235-6	307-10, 322
estimated value of advertising revenue	television programs
per household, 448–9	development, network participation,
sources of finance, 236, 239, 249-50,	300-1
263, 270, –88	development process, 290-1
television audience	non-duplication protection, 248
able to receive (ATR) data, 255-6	sources of revenue for networks,
measurement, 249, 272	304-5
potential off-the-air audience, 254–5	domestic off-network syndication,
results and their interpretation,	304-5
using, 256-8	foreign syndication, 304
net weekly circulation (NWC) data,	television see CATVs, Financial Interest and
255-6	Syndication Rules
variables influencing viewing	television signals
program alternatives, 251–4	distribution costs for CATVs, 247
program duplication, 253–4, 258–61	leapfrogging, 248, 264
variance with time of day or week, 273,	line-of-sight limitation, methods of
282-6	overcoming, 238
television audience – revenue relationship,	television stations
249–50	advertising revenue, 270–88
results when audience is subdivided by	determinants of audience, 250–1
	Grade A contour, 248, 264
day part, 282–4, 285, 286	Grade B contour, 248, 264
results when audience subdivided by	network affiliation, 271
location	revenue
all stations and all revenue, 273–9	affiliated compared with non-affiliated,
non-network revenue and network	272
compensation, 279–82	determinants, 271–3
UHF and VHF stations, 278–9	effect of cable television, 271
television licence scheme, 235–6	network compensation for commercial
television, network	spots, 271
affiliation agreements with local	testing hypotheses see hypotheses tests
television, 299	Theocharis, R.D., 217–31
contract with program supplier, 307	Tirole, J., 204–5
contracts for program development,	Tokyo Airport (Narita), limitations, 61–2
303-4	travel agents
economics, 296–7	
economies of integration, 297, 298–300	airline commission, 63–4 computer reservation systems, 65–8,
monopsony power, 306–7	76–7
obtaining programs, 296, 297	
participation in program development,	Turner, D., 139–40, 143, 144
300-1	UHF broadcast band
program scheduling, 299	audience – revenue relationship, 278 – 80
economies, 301–2	
protection of packagers from network,	growth in number of stations, 242–3 number of channels, 236
291–3	United States v. Aluminium Company of
risk sharing arrangements, 302-6	America (1945), 13, 27, 34, 51
contractual provisions, 303 – 4	
distribution rights, 305–6	United States v. American Tobacco Co., (1946), 51
pooling development projects, 303	
prime-time entertainment, 303, 321	United States v. CBS (1980), 292 United States v. L.I. du Pont de Nemours
selection of pilot programs, 303	and Company (1956), 51
sequential investment in program	
development, 302–3	United States v. International Business  Machines Corp., v. 140–3, 144
supply of series episodes, 303–4	Machines Corp., x, 140–3, 144,
scale economies 297, 298–300, 321	200

## **490** Index

United States v. United Shoe Machinery
Corporation (1953), 27, 51
United States v. Von's Grocery Co. (1966),
33, 35
US Parole Board, empirically-based
sentencing guidelines, 383
US—Far East air travel, 58,
barriers to entry, 60—2, 75
price competition, 63
role of non-Japanese foreign flag carriers,
73—4
see also Pacific Division Transfer Case

US-Japan Civil Aviation Agreement, 61

van Breda, M., 111, 114

VHF broadcast band, number of channels, 236 Villard, H., 174 Visit USA (VUSA) fares, 63 von Neumann, J., 193–4

von Stackelberg, H., 194

wage discrimination, use of multiple regression in legal proceedings, 424–5, 426, 427–9 warehousing policy see television, network Whinston, M., 205–6 Wilson, R., 206–7 Worley, J.S., 174