Index

aggregation
league-level 36, 41
aggressive play
potential use in successful strategy 88–9
shift in value of 94
asymmetric markets 7
Atlético Madrid
media revenue acquired by 21
attendance xii, 117, 125, 135, 138–9, 147, 154, 156, 158
consumer preference 135–6, 151
demand 131–2
fan loyalty 136–8, 146, 149–51
impact of weather conditions on 161, 163
of occasional spectators 154, 161, 163
regression analysis of 140–42
season ticket holders 154–6
seating 128–31
sellouts 136
attendance time series analysis 35–41
BP method 36–8
impact of lockout on 36
Austria 203
Autonomous Community of Asturias 211
Barcelona FC 156–7, 161
fans of 23–4, 31
media revenue acquired by 21–2, 29, 31
Bayern Munich
media revenue acquired by 22
Belgium 203
‘brand Spain’ 217
Bundesliga 18, 30
competitive balance in 29, 32
divisions of 69–70
financial liabilities in 64
media revenue sharing in 21
reliance on gate ticket revenue in 15
wage elasticity to points ratio 66
Canada 26, 45, 86, 169
Montreal 47
Toronto 82, 141
Vancouver 82
capacity constraint 130, 156
closed league 6–9, 11, 16
competitive balance xi, 14, 24, 41
supply of talent in 6
Club’s Day match 157–8, 161, 163
concept of 156
Collective Bargaining Agreement (CBA)
examples of 85, 107
collinearity problems
avoidance of 158
competitive balance xi, 14, 24, 41
congestion 195–6
correlation 57–8, 65–7, 129, 149–50
autocorrelation 175–87
spurious 173–85
cricket 194
impact of grounds 196
crime 190
deterrent elements used to curtail 88
economics of 82, 87, 95
cross-section 36
comparison 137
current quality 156, 161, 163
variables 157
diminishing returns to experience 89
capture of 102
economic factors
MSAs 173, 177–8, 180
performance in local economies 170
Index

economic impact 169, 184–5, 203, 218
analysis of 170
of investments 214–15, 217
of tourism 211–15
endogeneity 128–30
elasticity of demand 117–19, 121–2, 130
equilibrium of 121, 124–8
estimation of 123–4
revenue streams 123
two-stage least squares 118, 120
English Premier League (EPL) 4–5, 22, 65
competitive balance in 26–7
FRS10 55
lack of market regulation in 54
managers in 58
media revenue sharing in 20
net debt of clubs in 64
proposed use of salary caps in 21
reliance on media revenue in 15, 18, 27–8, 31
total media revenue generated by 22
transfer of players in 55–6, 58, 61
European Court of Justice
Bosman Ruling (1995) 56, 65
ex ante quality 156–7
variables of 156, 158, 163
ex post analysis 169–70
F test 161
fan welfare 4, 29, 32
interior 13
optimization of 14, 25–6
Federação Portuguesa de Futebol (FPF)
personnel of 208
Fédération Internationale de Football Association (FIFA)
personnel of 210
FIFA World Cup 203, 210, 214–15, 218
estimated expenditure for consumers 210
hosting bids 202, 208, 210–11, 217–18
impact of investment on employment figures during 215, 217
tourist expenditure generated by 213
First World War (1914–18)
impact on attendance in MLB 40
France 210
Fundación Observatorio Económico del Deporte (FOED) 202
generalized least squares (GLS) 39
Germany 66–9, 73, 203, 210, 214
Greece 69
gross value added (GVA) 211, 213, 218
impact of investment on 214
impact of tourism on 211
heteroskedasticity 140, 173
unobserved 158
income
elasticity 158
input–output analysis 202
input–output (I–O) tables 211
Instituto Superior de Economía e Gestão de Lisboa (ISEG) 202
instrumental variable-general method of moments (IV-GMM) 181–3, 186
Italy 66, 69
Japan 203, 210
La Liga (Primera Division) 5, 18, 23
attendance 154, 156
loss of competitive balance in 29–30
media revenue sharing in 22
net debt of clubs in 64
reliance on media revenue in 15, 31
season ticket holders in 154–5
total media revenue generated by 22
Liga de Fútbol Profesional 155–6
Ligue 1 18
competitive balance in 28–9
media revenue sharing in 21, 32
reliance on media revenue in 15, 28–9
total media revenue generated by 22
location characteristics 194–5
lockout 81–4, 87–90, 94–6
impact on attendance time series 36
log-log linear specification 157–8
Lyon
media revenue acquired by 22
Major League Baseball (MLB) 4, 17–18, 30, 141, 145–6
American League (AL) 36–8, 40–42, 44–5, 47
attendance 35–41, 46–8, 135, 139, 145, 151
Competitive Balance Tax (CBT) 19
impact of PED scandal in 47
impact of racial integration on 42, 47
league expansion 44–5
local revenue streams in 18
National League (NL) 36–8, 41–2, 44–5, 47
player strike (1994–5) 18, 26
reliance on gate ticket revenue in 15, 26
structural break points in 35–6, 38, 45
marginal effect 66, 125
estimation of 102, 193
market size
variables 161, 163
match uncertainty 157
maximum likelihood 183
monopoly markets 3
National Basketball Association
(NBA) 63, 103, 108
local revenue sharing in 18–19
payroll cap strategy of 20, 26
reliance on gate ticket revenue in 15, 123
National Collegiate Athletic Association (NCAA) 170–72, 175, 185–6
divisions of 170–72
attendance 136
Collective Bargaining Agreement (CBA) 107
draft 106–7
fan loyalty 136–7
hard salary cap in 25, 54, 105
minimum payroll in 19
offensive linesmen in 99–101, 104–7, 110–11
Players Association (NFLPA) 101
reliance on media revenue in 15, 18, 31
revenue sharing in 18, 32
salary models in 100–104, 108, 111
Super Bowl 23, 172, 175, 186
unshared local revenue in 18
National Hockey League (NHL) 18, 26, 83–5, 89
attendance 136
Collective Bargaining Agreement (CBA) 85
compensation of players 91
fighting in 81–3, 87, 95
formation of (1917) 82
labor market of 81
local revenue sharing in 18–19
lockout season (2004–5) 81, 83, 91, 94
minimum payroll in 19
personnel of 95
reliance on gate ticket revenue in 15
rule changes in 84–5
salary discrimination in 86–7
salary models 94–5
National Junior College Athletic Association 170
Nationwide Building Society
property data provided by 189, 196
transactions data provided by 191, 196
neighbourhood characteristics 191, 194–6
link with property prices 189–90
Netherlands
Holland 69, 203
occasional spectators 156
attendance of 154, 161, 163
open league 7
revenue sharing solution 8–9
supply of talent in 6
ordinary least squares (OLS) 141
estimation 87, 117, 141–2, 158, 174–9
single-equation 117
panel data 138, 157
dynamic panel 170, 185
multifactor models 138–41
pay–performance relationship 66–8, 71–3
factors in 63, 70
payroll cap
combined with equal revenue sharing 13, 18
examples of 19–20
impact of 9–10, 13
league-wide 9
payroll floor
examples of 19
penalties 83, 86–7, 110
impact on salary 95
major 85, 90, 94
measurements of 91–2, 94
minor 83–5, 89–90, 94
misconducted 85
penalty minutes
use as proxy for violent behaviour 86–7
performance
current quality 161
player salaries 65
playing success 53
violent acts 90
player cost controls 17, 31
development of 4
plus-minus statistic 89, 92
pooled analysis 189, 191, 196
population 107, 140–41, 144, 149, 156
density 128
Portugal 69
bid for hosting FIFA World Cup 208, 217–18
post-lockout
value of aggressive play during 94
pre-lockout
value of aggressive play during 94
profit maximization 5, 120, 122, 124
promotion and relegation 70, 157
systems of 64
property prices 192
link with neighbourhood characteristics 189–90
quantile regression 102, 108, 110

Real Federación Española de Fútbol (RFEF) 202
personnel of 208

Real Madrid FC 157, 161
fans of 23–4, 31
media revenue acquired by 21–2, 29, 31
referee 81, 89, 94, 100
use of multiple 87–8
use of ‘zero tolerance’ policies by 83
returns to skills 87
revenue sharing 4
impact on competitive balance 5
local 18–19
media 5, 21–2, 29, 31
Rottenberg, Simon 3, 36
invariance proposition 7
rugby 194
Russian Federation 208

salary 7, 9, 54, 88–9, 100, 106–7
cap 4, 25, 54, 95, 102, 105
discrimination 86
impact of penalties on 95
inflation of 57
maximum 91
minimum 91
models of 101, 103–4, 111
real 91
relationship with team performance 65–6
season effects 157
season uncertainty 157
consecutive 36–8, 48, 135, 140
Second World War (1939–45) 42
impact on attendance in MLB 35, 40–41
semi-log model 193
Serie A 15, 18
media revenue sharing in 21–2
operating losses of clubs in 64
reliance on media revenue in 29, 31
wage elasticity to points ratio 66
Sevilla
media revenue acquired by 21
social composition 192
South Africa 203, 210
South Korea 136, 203, 210
Spain 157
bid for hosting FIFA World Cup 208, 210–11, 217–18
stadium effect 189–90, 194, 196
construction 190–91
Index

227

distance ring 195–6

distance-varying effect 195

standings of the teams 157

stationary periods 36

non-stationary periods 36

Stats Incorporated

STATSPASS 105

strong form invariance

concept of 7

structural amenities 195

Switzerland 69, 72, 203

SWOT analysis 209

concept of 208

use of 202

team budgets

visiting teams 161

televising of matches 157

theory of sports leagues

concept of 5

ticket price 121, 131, 135, 140–42, 156, 158

average 132

estimated coefficient of 144

non-ticket game-day revenue 123

raising of 122

Tobit estimation 91

transfers 53

treatment area 191–2, 196

truncated distribution 137

Turkey 69

uncertainty of outcome hypothesis

(UOH) 30–31, 35, 37–8, 42, 44, 46

appeal of 14

concept of 4, 7, 42

Union of European Football

Association (UEFA) 30, 72–3

Champions League (UCL) 22–3, 27, 30, 66

European Football Championship

(EURO) 203

financial fair play plan (FFP) 21

media revenue distribution 22

United Kingdom (UK) 66, 69

Census (2001) 191

London 189–91

Olympic Games (2012) 191

United States of America (USA) 54, 136, 169–70, 190

Chicago 140–41, 147

Los Angeles 140–41, 175, 186

Miami 187

New York 140–41

San Diego 46–7

Seattle 178

Sports Broadcasting Act (1961) 17

Washington DC 178

US Census Bureau 141, 172

metropolitan statistical areas

(MSAs) 172–3, 175–81, 186–7

Valencia

media revenue acquired by 21

Villareal

media revenue acquired by 21

violence 83, 86

examples of 82

fighting 81–2, 87, 95

policing of 88–9

relationship with consumer demand 85–7

thuggery 87, 95

wages 21, 53

weather conditions

impact on attendance 161, 163

win-max league 12, 15

examples of 16–17

potential use of revenue sharing in 13

social optimum of 11

use of payroll cap and revenue

sharing in 20

win the championship 66, 160