Index

aggregate corporation tax revenue
aggregate corporation tax revenue elasticity simulations 150, 155, 166–7
corporation tax buoyancy in the UK 17–18
corporation tax receipts 10–12, 14–17
economic cycles in aggregate corporation tax revenue elasticity 40–42
OECD countries 8–9, 10, 13
public expenditure demand 5, 9, 219
small firms 37, 215
UK 14–18, 167–8, 203
volatility 6, 9–13, 14, 15, 23, 167, 213, 219–20
aggregate corporation tax revenue elasticity 40–45
see also aggregate corporation tax revenue elasticity simulations
aggregate corporation tax revenue elasticity simulations
alternative group deductions claiming 164–6
benchmark case 151–5
importance 166–7
overview 22, 149–50, 219–20
revenue elasticities over the long run 162–4
simulation procedure 150–151
variations from the benchmark case 155–62
aggregate declared profit response simulations
behavioural response estimates 188–91
overview of simulation model properties 185–7
profit growth cycles 193–4
simulation parameters 191–3
aggregate declared profits 185, 195
see also aggregate declared profit response simulations; aggregate deductions to declared profits ratio; declared profits; individual aggregate elasticities of declared profits; individual elasticities of declared profits; individual partial elasticities of declared profits
aggregate declared profits to net profits ratio 186
aggregate deductions to declared profits ratio 121–2
aggregate elasticity of corporation tax revenue with respect to aggregate profits 202–3
aggregate elasticity of corporation tax revenue with respect to tax rate changes 102, 188, 189, 201
aggregate elasticity of declared profits with respect to tax rate changes 185, 199, 204–6, 207
aggregate elasticity of deductions with respect to declared profits 195, 196–7, 199, 204, 205–7
aggregate elasticity of deductions with respect to tax rate changes 204, 205
see also aggregate partial elasticity of deductions with respect to tax rate changes
aggregate elasticity of gross profits with respect to tax rate changes 185, 203
aggregate elasticity of net profit with respect to declared profit 95–6, 97, 98–102, 194, 217–18
aggregate elasticity of net profits with respect to tax rate changes
behavioural responses of firms to corporation tax rate changes
simulation 195–8, 199–201, 202–5, 207, 221
decomposing behavioural elasticities 185
aggregate elasticity of proportion of declared deductions with respect to tax rate changes 185, 199, 201, 203
aggregate elasticity of proportion of declared profits with respect to tax rate changes 190, 199, 201, 203
aggregate gross profits 98, 99, 100
aggregate losses 100–103, 150, 155
aggregate net taxable profits 98, 99, 100
aggregate partial elasticity of deductions with respect to declared profits 185, 191
aggregate partial elasticity of deductions with respect to tax rate changes 185, 203
aggregate profits 39, 155
Altshuler, R. 48, 79, 103
Auerbach, A.J. 48–9, 55–6, 72, 79, 94, 103, 170, 171, 183, 195, 209
automatic/endogenous behavioural responses
behavioural responses to corporation tax rate changes 84–5, 86–7, 105–6, 217–18
simulation 198, 201, 202–7, 220–221
decomposing behavioural elasticities 182–5
autonomous behavioural responses
aggregate declared profit response simulations 188–91
behavioural responses to corporation tax rate changes 84, 85–6, 93–104
simulation 201, 203–7
average corporation tax rate
corporation tax fiscal drag in the UK 19
corporation tax revenue elasticity 28, 34
corporation tax revenue elasticity in the UK 35, 36, 37
see also effective average tax rate (EATR) changes; implicit average tax rate
average profit growth rates 151–2
Bakker, A. 116
banks 189
Bartelsman, E.J. 49, 76, 87–8, 169, 188, 189
Beetsma, R.M.W.J. 49, 76, 87–8, 169, 188, 189
behavioural responses of firms to corporation tax rate changes
aggregate corporation tax revenue elasticity simulations 161–2
behavioural elasticity components 81–2
corporation tax loss asymmetries 50, 60–64, 100–104, 105–6, 216, 218
declared profits and deductions 80–81
decomposition for a single firm 179–85
economic cycles 85, 93–104, 217–18
expected signs 83–7
illustrative examples 87–93
modelling corporation tax revenue, importance of 5, 9
net taxable profits 78–80
overview 22, 75–7, 216–18
responses over economic cycles 93–104
types 49–50, 75, 77–8
see also automatic/endogenous behavioural responses;
autonomous behavioural responses; behavioural responses of firms to corporation tax rate changes; behavioural responses of firms to corporation tax rate changes simulation; deductions shifting; income shifting; non-corporate firm status; profit shifting; real deductions responses; real employment responses; real investment responses; real profit responses; real responses
behavioural responses of firms to corporation tax rate changes simulation
benchmark results 195–8
declared deductions to declared profits ratio 195
decomposing behavioural elasticities 179–85
economic cycles 195–8, 221
overview 22, 169–71, 220–221
sensitivity analysis 199–207
simple corporate tax model 171–9
INDEX

simulation model properties 185-94
behavioural response estimates 188-91
profit growth cycles 193-4
simulation parameters 191-3
behavioural responses of shareholders to corporation tax rate changes 5
behavioural responses of workers to corporation tax rate changes 5, 214
behavioural responses to income tax regime changes 61, 75, 83, 104, 180
booms see economic cycles
business cycles see economic cycles

capital allowance growth 159
capital allowance pools 129, 130, 151, 174, 177
capital allowances
aggregate corporation tax revenue elasticity simulations 151, 159, 160, 164, 167, 220
aggregate declared profit response simulations 186-7
behavioural responses to corporation tax rate changes 83, 95
simulation 197
corporation tax revenue elasticity 30-31
decomposing behavioural elasticities 184
economic cycles in aggregate
corporation tax revenue elasticity 40, 41
modelling deductions of firms in groups in the UK 135, 136, 137, 138-9
modelling deductions of single firms in the UK 128-33, 225-30
profit growth cycles 194
simple corporate tax model 174, 175-8
UK 95, 129, 175
Clausing, K.A. 103, 189-91, 192
complexity, in modelling corporation tax revenue 213-14
consolidated accounting 33
Cooper, M. 48, 49, 103
corporation tax accruals 14-16, 17
see also corporation tax liabilities
corporation tax base 134, 168
corporation tax buoyancy 14-18, 155, 157
corporation tax compliance 18, 219
corporation tax credits 19, 78-9
corporation tax evasion/avoidance 82, 182
corporation tax exemptions 5
corporation tax fiscal drag 13-14, 17, 18-20, 215
corporation tax liabilities
behavioural responses to corporation tax rate changes simulation 206-7
calculation 20
corporation tax accruals 14-16, 17
corporation tax loss asymmetries in a single corporation with more than one profit source 52, 54-5, 56, 57-8, 59, 60
corporation tax revenue elasticity 27, 28-9, 34
UK 34-5, 36-7
net profit changes 62-3
net taxable profit composition 78
profit shifting 60-61
simple corporate tax model 173
corporation tax liability growth 27-8
corporation tax loss asymmetries
aggregate declared profit response simulations 192-3, 220
behavioural responses to corporation tax rate changes 50, 60-64, 100-104, 105-6, 216, 218
simulation 197
economic cycles 48, 50, 56, 65-72, 100-104, 105-6, 170, 216, 235-44
investment 48-9, 79
OECD countries 47, 53, 103
overview 21-2, 47-50, 215-16
single corporation with more than one profit source (see corporation tax loss asymmetries in a single corporation with more than one profit source)
UK 47, 48, 79, 103, 170, 173, 187
US 48-9, 56, 72, 79, 103, 170
corporation tax loss asymmetries in a single corporation with more than one profit source
losses and deductions 51-6, 223-4
numerical example 56-60
simple corporate tax model 173
corporation tax loss symmetries 55, 56
corporation tax rate changes
aggregate corporation tax revenue elasticity simulations 161-2
corporation tax buoyancy in the UK 18
'lost revenues' 7
net profit changes 62, 63, 64
OECD countries 6, 7
profit shifting 60-61, 62
public debt 7
simple corporate tax model 171–2
small firms 19, 161–2, 215
UK 19, 51, 161–2, 168
see also corporation tax rates; effective
average tax rate (EATR) changes;
single corporation tax rate; two
corporation tax rates; individual
aggregate elasticities with respect
to tax rate changes; individual
elasticities with respect to tax
rate changes; individual partial
elasticities with respect to tax rate
changes
corporation tax rates
aggregate corporation tax revenue
elasticity simulations 150
aggregate declared profit response
simulations 186–7
corporation tax liability calculation 20
corporation tax loss asymmetries 47–8
in a single corporation with more
than one profit source 55, 56,
57, 223–4
UK 19, 34, 35, 36, 37–8, 51, 161–2,
168
see also average corporation tax rate;
corporation tax rate changes;
effective average tax rate (EATR)
changes; implicit average tax rate;
marginal corporation tax rates;
single corporation tax rate; two
corporation tax rates
corporation tax receipts 10–12, 14–17
see also aggregate corporation tax
revenue; corporation tax revenue
corporation tax refunds 19–20, 72
corporation tax revenue
behavioural responses to corporation
tax rate changes over the
economic cycle 103–4
economic cycles in aggregate
corporation tax revenue elasticity
40–42
large firms 37–8
see also aggregate corporation tax
revenue; corporation tax revenue
elasticity; corporation tax revenue
forecasting; corporation tax
revenue growth
corporation tax revenue elasticity
aggregate revenue elasticity 39–45
defined 14, 27–8, 215
economic cycles 33–4, 40–45, 215
elasticity of deductions with respect to
gross profits 28, 30–34
fiscal drag 14, 215
overview 215
single firms 27–9
tax schedule in UK 34–8
see also aggregate corporation tax
revenue elasticity simulations;
individual aggregate elasticities
of corporation tax revenues;
individual elasticities of
corporation tax revenues;
individual partial elasticities of
corporation tax revenues
corporation tax revenue forecasting 5–6,
23, 166–7, 213
corporation tax revenue growth
aggregate corporation tax revenue
elasticity simulations 154, 156,
157, 162–3, 166–7, 219
economic cycles in aggregate
corporation tax revenue elasticity
41–2, 43, 44, 45
fiscal drag 14, 18
tax buoyancy 13, 15
corporation tax rules 82, 85, 130–131,
183
corporation tax schedule changes 9, 13,
18, 161–2
corporation tax schedules 5, 9, 13–14,
34–8
CorpSim
model properties 21–2, 185–7, 214
modelling deductions of firms in
groups in the UK 137–46
modelling deductions of single firms in
the UK 132–3
see also aggregate corporation tax
revenue elasticity simulations;
aggregate declared profit
response simulations; behavioural
responses of firms to corporation
tax rate changes simulation;
modelling the distribution of
profits in the UK
cost efficiency, importance of and
modelling corporation tax revenue 4
costs of behavioural responses of firms to
corporation tax rate changes 82, 89,
171, 195
Creedy, J. 4, 18, 75, 78, 116
current losses 135–6, 144, 164
cycles, economic see economic cycles
INDEX

data
HMRC (UK Revenue and Customs department) 14–15, 16, 110, 112–22, 152, 154, 158, 186, 193
household models 213, 218
Office of National Statistics 16–17
scarcity, in modelling corporation tax revenue 21, 213, 222
declared deductions
aggregate declared profit response simulations 186–7, 192
behavioural responses to corporation tax rate changes 80–81, 82, 84–5, 89, 90, 180
simulation 195
decomposing behavioural elasticities 181
simple corporate tax model 173
see also declared deductions to declared profits ratio; proportion of deductions declared; individual aggregate elasticities of declared deductions; individual elasticities of declared deductions; individual partial elasticities of declared deductions
declared deductions to declared profits ratio 81, 92, 195
declared profits
aggregate declared profit response simulations 186–7, 192
behavioural responses to corporation tax rate changes 80–81, 82, 83–4, 85, 89, 90, 180
over the economic cycle 96, 97, 98
simulation 195, 204–6, 206
decomposing behavioural elasticities 181, 184, 185
defined 20
profit growth cycles 193, 194
simple corporate tax model 171, 172, 173, 174, 175–7, 178
see also aggregate declared profits; aggregate declared profits to net profits ratio; declared deductions to declared profits ratio; proportion of profits declared; individual aggregate elasticities of declared profits; individual elasticities of declared profits; individual partial elasticities of declared profits
declared profits to tax base ratio
aggregate declared profit response simulations 186, 191
behavioural responses to corporation tax rate changes 81, 82, 83, 85, 86, 88, 89, 90, 92, 93, 217
over the economic cycle 94
simulation 196, 196, 204, 206–7
decomposing behavioural elasticities 181, 184, 185
deductions
aggregate corporation tax revenue elasticity simulations 150, 151, 154, 159–60, 163–6, 167
aggregate declared profit response simulations 186, 187
behavioural responses to corporation tax rate changes 80–81, 217
simulation 198, 202–3, 220–221
composition 30
corporation tax fiscal drag in the UK 19, 20
corporation tax loss asymmetries in a single corporation with more than one profit source 51–2
corporation tax revenue elasticity 27, 28, 29, 30–31, 33–4, 215
decomposing behavioural elasticities 182–5
defined 20
economic cycles in aggregate corporation tax revenue elasticity 40, 41
economic cycles in corporation tax revenue elasticity 33–4
fixed order of deductions 136–7, 164–6
net taxable profit composition 78
profit growth cycles 193–4
simple corporate tax model 172–9
see also capital allowances; declared deductions; deductions growth; deductions shifting; group relief; investment expenditures; losses claimed against profits; modelling deductions of firms in groups in the UK; modelling deductions of single firms in the UK; qualifying expenditures; real deductions responses; individual aggregate elasticities of deductions; individual aggregate partial elasticities of deductions;
individual elasticities of deductions
deductions growth 194–5
deductions rate see loss deductions rate
deductions shifting
aggregate declared profit response simulations 188, 190, 191, 192
behavioural responses to corporation tax rate changes 81, 82, 84, 90, 91, 92, 93
simulation 199–201, 204, 205, 206
decomposing behavioural elasticities 180, 181, 182, 184
Demirgüç-Kunt, A. 49, 169, 188, 189
depreciation rate
modelling deductions of single firms in the UK 129, 130
simple corporate tax model 174, 176, 177, 178
depressions see economic cycles; global recession (2008–2010)
Devereux, M.P. 6, 7–9, 48, 54, 76, 79, 80, 167–8, 169
Dischinger, M. 49
discount rate, and corporation tax loss asymmetries 52, 54, 58
domestic banks 189
domestic firms 76, 169–70, 185, 192
Donnelly, M. 47, 53
dynamics of gross profits 122–5, 231–4
economic cycles
aggregate corporation tax revenue elasticity 40–45
aggregate corporation tax revenue elasticity simulations
benchmark case 151–5, 165
 revenue elasticities over the long run 162–4, 165
variations from the benchmark case 155–62
aggregate declared profit response simulations 192–3
behavioural responses to corporation tax rate changes 85, 93–104, 217–18
simulation 195–8, 221
sensitivity analysis 199–207
corporation tax loss asymmetries 48, 50, 56, 65–72, 100–104, 105–6, 170, 216, 235–44
corporation tax revenue elasticity 33–4, 40–45, 215
modelling corporation tax revenue, importance of 6
profit growth 192–4
simple corporate tax model 174–9
Edgerton, J. 48, 79
effective average tax rate (EATR) changes
behavioural responses to corporation tax rate changes over the economic cycle 104
corporation tax loss asymmetries 49, 216
in a single corporation with more than one profit source 52–3, 54, 55
OECD countries 8, 9
profit shifting 7–8
US 48–9, 72, 94, 103, 170
effective marginal tax rates (EMTRs) 8
effective rebate rate 47–8, 52, 70
efficiency of corporation tax collection 18
elasticity of corporation tax revenue with respect to gross profits 34–8
elasticity of corporation tax revenue with respect to net profits 34–8
elasticity of corporation tax revenue with respect to net to gross profit ratio
corporation tax buoyancy 13
corporation tax loss asymmetries 63, 64
over the economic cycle 65–6, 67–8, 69, 70, 71
elasticity of corporation tax revenue with respect to tax rate changes
behavioural responses to corporation tax rate changes 78, 88
corporation tax loss asymmetries 63, 64
over the economic cycle 66, 67, 70–71, 72
elasticity of declared deductions with respect to declared profits
behavioural responses to corporation tax rate changes 85, 86–7, 89, 93
over the economic cycle 93, 94, 104
elasticity of declared deductions with respect to tax rate changes 82, 85, 89
elasticity of declared profits with respect to gross profits 184, 185
elasticity of declared profits with respect to tax rate changes
behavioural responses to corporation tax rate changes 82, 84, 85–6, 88, 89
INDEX

over the economic cycle 94
decomposing behavioural elasticities 181, 184, 185
elasticity of deductions with respect to gross profits 28, 30–34
elasticity of deductions with respect to tax rate changes 180, 181, 183, 184
elasticity of gross profit with respect to tax rate changes
behavioural responses to corporation tax rate changes 82, 89, 90, 93, 217
simulation 201
decomposing behavioural elasticities 180, 181–2, 183, 185
elasticity of net profit with respect to declared profit
behavioural responses to corporation tax rate changes over the economic cycle 94, 95, 96, 97, 98
profit growth cycles 194
see also aggregate elasticity of net profit with respect to declared profit
elasticity of net profit with respect to tax rate changes
behavioural responses to corporation tax rate changes 79–80, 82, 83, 85–6, 87–93, 217
over the economic cycle 93–104
decomposing behavioural elasticities 179–85, 220
elasticity of net profits with respect to gross profits 34, 35
elasticity of net to gross profit ratio with respect to tax rate changes 63, 64, 66, 70, 71–2
elasticity of proportion of declared deductions with respect to gross profits 185
elasticity of proportion of declared profits with respect to gross profits 185
elasticity of proportion of deductions declared with respect to tax rate
behavioural responses to corporation tax rate changes 82, 88, 89, 90, 93, 217
decomposing behavioural elasticities 180, 181, 182, 184, 185
elasticity of proportion of profits declared with respect to tax rate
behavioural responses to corporation tax rate changes 82, 88, 89, 90, 93, 217
simulation 201
decomposing behavioural elasticities 180, 181–2, 184, 185
elasticity of qualifying expenditure with respect to declared profits 83–5, 89, 93
elasticity of qualifying expenditures with respect to tax rate 82, 83–4
elasticity of taxable income with respect to the net-of-tax retention rate 61, 75, 83, 104, 180
eligible expenditures see qualifying expenditures
endogenous behavioural responses see automatic/endogenous behavioural responses
enforcement of tax rules 82
equivalent tax function
corporation tax loss asymmetries 54–5, 56, 57–8, 59, 60, 216
in a single corporation with more than one profit source 54–5, 56, 57–8, 59, 60
profit-shifting 60–62
Europe 88, 189
see also Ireland; UK
excess capital allowances
aggregate corporation tax revenue elasticity simulations 164
modelling deductions of firms in groups in the UK 133, 135, 136
modelling deductions of single firms in the UK 130, 131, 132, 133, 225–6, 228, 229
expected future losses 52, 53, 62, 128, 135–6
expected future profits
corporation tax loss asymmetries 52, 53, 57
modelling deductions of firms in groups in the UK 135–6
modelling deductions of single firms in the UK 128, 130, 131
profit-shifting 62
expenditures, qualifying see qualifying expenditures
Feldstein, M. 61, 75, 76, 83, 104, 180
financial firms 16–17, 168
firms see behavioural responses of firms to corporation tax rate changes;
behavioural responses of firms to corporation tax rate changes
simulation; domestic banks;
domestic firms; financial firms; foreign banks; foreign subsidiaries; groups of firms; large firms; multinational banks; multinational corporations; non-corporate firm status; non-financial firms; single firms; small firms
fiscal depreciation rules 128, 129, 172, 186, 190
fiscal drag 13–14, 17, 18–20, 215
fixed order of deductions 136–7, 164–6
forecasting see corporation tax revenue forecasting
foreign banks 189
foreign investment 88–9, 189
foreign-source income 110–111
foreign subsidiaries 82
future losses see expected future losses future profits see expected future profits
GDP and corporation tax revenue relationship 8–9, 10, 13, 168, 213
GDP growth, and corporation tax buoyancy in the UK 15, 16, 17
Gemmell, N. 4, 18, 78
globalisation, and importance of modelling corporation tax revenue 3, 6–7
Gresik, T.A. 75
gross operating surplus of financial and non-financial companies (F+NF GOS) 16–17
gross profit growth aggregate corporation tax revenue elasticity simulations 159, 162–4
corporation tax buoyancy in the UK 15, 16, 17
corporation tax revenue elasticity 28, 29
gross profits aggregate corporation tax revenue elasticity simulations 150, 151, 159
behavioural responses to corporation tax rate changes 80–81, 83, 89, 180
over the economic cycle 96, 97–8, 99, 100–102, 103
simulation 195, 196–7, 220
consolidated accounting in corporation tax revenue elasticity 33
corporation tax fiscal drag in the UK 19
corporation tax loss asymmetries 51, 52, 53–4, 55, 56, 57, 58–9, 79
over the economic cycle 67, 71, 72 in a single corporation with more than one profit source 51, 52, 53–4, 55, 56, 57, 58–9
corporation tax revenue elasticity 27, 28, 29, 30–31, 34
decomposing behavioural elasticities 183, 184
defined 20, 109–10, 154
economic cycles in aggregate corporation tax revenue elasticity 41
economic cycles in corporation tax revenue elasticity 33–4
group relief deductions in corporation tax revenue elasticity 31, 32
mobility, empirical analysis 231–2
modelling deductions of firms in groups in the UK 133, 134–6, 137, 138
modelling deductions of single firms in the UK 127–8
net taxable profit composition 78
profit shifting 61, 62
profit growth cycles 193, 194
simple corporative tax model 172
see also aggregate gross profits; dynamics of gross profits; gross profit growth; modelling the distribution of profits in the UK; net to gross profits ratio; individual aggregate elasticities of gross profits; individual aggregate partial elasticities of gross profits; individual elasticities of gross profits
group loss pools 138, 139
group losses aggregate corporation tax revenue elasticity simulations 164–6, 167
corporation tax loss asymmetries 173
modelling deductions of firms in groups in the UK 133–6, 137–9
group net taxable profits 136, 137–8, 139
group profits (net of taxable allowances) 138–9
group relief aggregate corporation tax revenue elasticity simulations 159, 164
aggregate declared profit response simulations 187
consolidated accounting 33
corporation tax loss asymmetries 47, 53, 173

corporation tax revenue elasticity 31–2

see also modelling deductions of firms in groups in the UK

Gruber, J. 83, 181–2

Grubert, H. 76, 82, 88, 169, 188, 190

Heinemann, F. 18

Hines, J.R. 76, 88–9, 169, 188, 189

HMRC (UK Revenue and Customs department) 14–15, 16, 110, 112–22, 152, 154, 158, 186, 193

household microsimulation models 213, 214, 218

Hubbard, R.G. 76, 80, 88, 169, 188

Huizinga, H. 49, 76, 88, 169, 188, 189

implicit average tax rate 48, 56

income shifting

behavioural response to corporation tax rate changes 49–50, 75, 82
defined 49–50, 75, 80–81, 169, 217

multinational corporations 76

see also deductions shifting; profit shifting

income taxes

behavioural responses to tax regime changes 61, 75, 83, 104, 180

fiscal drag 18–19

indirect taxes 18

industrial buildings investment 129–30

international competition in corporation tax rates 6–8

international corporation tax rates 6–9

investment expenditures

aggregate corporation tax revenue elasticity simulations 151, 153, 159, 160, 164

aggregate declared profit response simulations 186–7, 189

behavioural responses to corporation tax rate changes 83–4, 88–9

corporation tax loss asymmetries 48–9, 79

corporation tax revenue elasticity 30

decomposering behavioural elasticities 182

economic cycles in aggregate corporation tax revenue elasticity 40, 41

modelling deductions of single firms in the UK 128–30

simple corporate tax model 172, 174

Ireland 7, 10–11

Klemm, A. 48

Knittel, M. 48, 49, 103

labour supply effects of tax and transfer changes 5, 214

Laeven, L. 49, 76, 88, 169, 188, 189

large firms 37–8, 161, 185, 203

see also multinational corporations

loan-relationshop loss pools

modelling deductions of firms in groups in the UK 137, 140, 141, 142, 143, 144, 145, 146

modelling deductions of single firms in the UK 130, 131, 132, 133

loan-relationshop losses

modelling deductions of firms in groups in the UK 134–5, 137, 139, 140, 141, 142, 143, 144–6

modelling deductions of single firms in the UK 130, 131, 132–3

loan-relationshop profits

aggregate corporation tax revenue elasticity simulations 150, 151, 153, 158

aggregate declared profit response simulations 186


modelling deductions of firms in groups in the UK 134–5, 137, 139, 140, 141, 142, 143, 144, 145, 146

modelling deductions of single firms in the UK 127–9, 130, 131, 132, 133, 225–30

long run aggregate corporation tax revenue elasticity 162–4, 167

loss deductions rate

aggregate declared profit response simulations 186–7

behavioural responses to corporation tax rate changes 80, 81, 84–5, 89, 90, 92

over the economic cycle 95

corporation tax loss asymmetries

over the economic cycle 65–6, 67–8, 69, 70–71

in a single corporation with more than one profit source 54, 55–6, 57, 58–60, 223

distribution of profits in the UK 111
net profit changes 63, 64
profit shifting 62
loss pools
  behavioural responses to corporation
tax rate changes
  over the economic cycle 96, 98, 100
  simulation 196
corporation tax loss asymmetries 47,
  52, 54
economic cycles in aggregate
corporation tax revenue elasticity
  40, 41
modelling deductions of firms in
groups in the UK 137–8, 139, 140,
  141, 142, 143, 144, 145, 146
simple corporate tax model 175, 178–9
  see also group loss pools; loan-
  relationship loss pools; trading
  loss pools
loss to profit ratio 56
losses
  aggregate corporation tax revenue
  elasticity simulations 150, 154,
  155, 156, 159, 160, 162, 164–6,
  167
  aggregate declared profit response
  simulations 186, 187
  behavioural responses to corporation
tax rate changes 83
  over the economic cycle 96, 97, 98,
  99, 100–103
corporation tax buoyancy in the UK 15
corporation tax fiscal drag in the UK
  19–20
corporation tax loss asymmetries 79,
  216
  over the economic cycle 67–8, 69–70,
  71, 72
  in a single corporation with more
  than one profit source 51–2,
  53–4, 55, 56, 57, 58–9
  corporation tax revenue elasticity 30,
  33
decomposing behavioural elasticities
  182–3, 184
distribution of profits in the UK 111
group relief deductions in corporation
tax revenue elasticity 31–2
modelling deductions of firms in
groups in the UK 133–6, 137–46
modelling deductions of single firms in
the UK 130–131, 132–3, 225–30
profit shifting 61
profit growth cycles 193, 194
simple corporate tax model 172, 173,
  175, 176, 178–9
sizes 48, 102–3, 216
UK 48, 103
see also aggregate losses; corporation
tax loss asymmetries; current
losses; expected future losses;
group losses; loan-relationship
losses; loss deductions rate; loss
pools; loss to profit ratio; losses
claimed against profits; past
losses; proportion of losses used
as group relief to offset profits;
‘stranded losses’; trading losses
losses claimed against profits
aggregate corporation tax revenue
  elasticity simulations 155, 159,
  160, 164–5, 167, 220
aggregate declared profit response
  simulations 186, 187
behavioural responses to corporation
tax rate changes
  over the economic cycle 94–5, 96,
  103, 105–6, 218
  simulation 195, 197, 198
corporation tax loss asymmetries 47,
  216
  in a single corporation with more
  than one profit source 51–2,
  53–4, 55, 56, 57, 58–60, 173
corporation tax revenue elasticity
  30–31
decomposing behavioural elasticities
  184
economic cycles in aggregate
corporation tax revenue elasticity
  40, 41
modelling deductions of firms in
groups in the UK 135–6, 137, 138,
  139, 140, 141, 142, 143, 144–6
modelling deductions of single firms in
the UK 130–131, 132, 133
profit shifting 62
simple corporate tax model 172, 173,
  175, 176–7, 178–9
‘lost revenues’ 7
marginal corporation tax rates
corporation tax fiscal drag in the UK
  19
corporation tax loss asymmetries in a
  single corporation with more than
  one profit source 51
INDEX

- corporation tax revenue elasticity: 28, 34, 35, 36
  - see also: effective marginal tax rates (EMTRs)
- marginal relief fractions: 34, 35, 36, 37
- Markusen, J.R.: 76, 169
- McCrae, J.: 48
- minimisation of group net taxable profits
  - see: modelling deductions of firms in groups in the UK
- mixture distribution of profits, modelling the distribution of profits in the UK: 114–17, 119
- modelling corporation tax revenue constraints: 213–14
- future research: 23, 209, 214
- importance: 3, 4–7, 166–7
- as under-explored: 3–4, 213
  - see also: CorpSim
- modelling deductions of firms in groups in the UK
  - illustrative examples: 137–43
  - further details of Case 2: 144–6
  - overview: 133–4
  - priorities in claiming group deductions: 134–7
- modelling deductions of single firms in the UK
  - calculating net profits: 225–30
  - capital allowances: 128–30
  - illustrative example: 132–3
  - overview: 22, 127–8, 218–19
  - priorities in claiming deductions: 130–132
  - use of losses: 130
- modelling the distribution of profits in the UK
  - aggregate corporation tax revenue elasticity simulations: 150
  - dynamics of profits: 122–5, 231–4
  - form of the distribution: 112–14
  - mixture of the distribution: 114–17
  - overview: 22, 110–111, 218
  - simulating the joint distribution: 117–22
- multinational banks: 189
- multinational corporations
  - corporation tax loss asymmetries: 47
  - decomposing behavioural elasticities: 185
  - profit shifting: 7–8, 87–9, 169, 188–91, 192
  - real responses: 76, 88–9, 169, 190–191
- Mutti, J.: 169
- negative corporation tax buoyancy in the UK: 117
- negative corporation tax revenue growth
  - aggregate corporation tax revenue elasticity simulations: 156, 166–7
  - economic cycles in aggregate corporation tax revenue elasticity: 42, 43, 44, 45
- negative net profits: 67–8, 69–70, 71, 72
  - see also: losses
- negative profit growth: 42, 43, 44, 45, 156–7
- net taxable profit thresholds: 34, 35–6, 37, 38
- net taxable profits
  - aggregate corporation tax revenue elasticity simulations: 150, 163–4
  - behavioural responses to corporation tax rate changes: 79–80, 81
  - over the economic cycle: 96, 97–8, 103
  - simulation: 206–7
  - composition: 78–9
  - corporation tax liability calculation: 20
  - corporation tax loss asymmetries: 62–4
  - over the economic cycle: 67–8
  - in a single corporation with more than one profit source: 56
- corporation tax revenue elasticity: 27, 28, 34, 35–8
- decomposing behavioural elasticities: 180, 181, 185
- defined: 20, 193
- distribution of profits in the UK: 111
- economic cycles in aggregate corporation tax revenue elasticity: 40–41
- modelling deductions
  - see: modelling deductions of firms in groups in the UK; modelling deductions of single firms in the UK
- multiple corporation tax rates in the UK: 19
- profit growth cycles: 193–4
- profit shifting: 60–61
- simple corporative tax model: 172–3, 176
- see also: aggregate net taxable profits; group net taxable profits; group profits (net of taxable allowances); modelling the distribution of profits in the UK; negative net profits; net taxable profit thresholds; net to gross profits
INDEX

ratio; profit changes; profit growth; profit growth rate; profit shifting; zero net profits; individual aggregate elasticities of net profits; individual aggregate partial elasticities of net profits; individual elasticities of net profits
net to gross profits ratio
aggregate corporation tax revenue elasticity simulations 163–4
corporation tax loss asymmetries over the economic cycle 65–9, 70–72
net profit changes 62, 63, 64
profit shifting 61, 62
UK 170
non-corporate firm status 76, 170
non-financial firms 16-17
OEeD countries
corporation tax loss asymmetries 47, 53, 103
corporation tax rates 6, 7
corporation tax revenues 8–9, 10, 13
effective average tax rates (EATRs) 8, 9
profit shifting 87–8, 188, 191
volatility of corporation tax revenue 6
Office of National Statistics (UK) 16-17
partial elasticity of declared deductions with respect to tax rate changes 85–6, 94
partial elasticity of declared profits with respect to gross profits 184, 185
partial elasticity of declared profits with respect to tax rate changes 189
partial elasticity of deductions with respect to declared profits 184
partial elasticity of deductions with respect to gross profits 183–4, 185
partial elasticity of loss deduction ratio with respect to net to gross profit ratio 63, 64, 65, 68, 71
partial elasticity of qualifying expenditure with respect to tax rate changes 84, 89, 90, 92, 217
partial elasticity of tax revenue with respect loss deduction rate 63–4, 65
partial elasticity of tax revenue with respect to net to gross profit ratio 63–4, 65, 71
past losses
aggregate corporation tax revenue elasticity simulations 164–5
behavioural responses to corporation tax rate changes simulation 198
corporation tax loss asymmetries 52
deconstructing behavioural elasticities 182–3
modelling deductions of firms in groups in the UK 135–6, 137, 138
simple corporate tax model 172, 173, 175
plant and machinery investment 129–30
positive corporation tax buoyancy in the UK 117
Poterba, J.M. 170, 183
present value of corporation tax liabilities 52, 53, 54, 57, 59, 215–16
profit changes 157–9
see also profit growth
profit distribution 39
see also modelling the distribution of profits in the UK
profit growth
aggregate corporation tax revenue elasticity 40–42, 43, 44, 45
aggregate declared profit response simulations 191–4
behavioural responses of firms to corporation tax rate changes simulation 195–9, 201–3, 221
corporation tax revenue elasticity 14
economic cycles 40–42, 43, 44, 45, 192–4
fiscal drag 13–14
tax buoyancy 13, 15
UK 192–3
profit growth rate
aggregate corporation tax revenue elasticity simulations 151–7, 158–9, 161, 162–4, 167
distribution of profits in the UK 122, 123, 125
profit offsets see deductions
profit shifting
aggregate declared profit response simulations 188–91, 192
behavioural responses to corporation tax rate changes 81, 82, 84, 90, 91, 92, 93
over the economic cycle 96
simulation 199–201, 202–3, 204–7
corporation tax loss asymmetries 49–50, 60–62, 216
deconstructing behavioural elasticities 180, 181, 182, 184
defined 50, 169
domestic firms 192
Europe 88, 189
international corporation tax rates 7-8
multinational corporations 7-8, 87-9, 169, 188-90, 192
OECD countries 87-8, 188, 191
UK 88, 188
US 88-9, 94, 189-91, 192, 209
profit sources 21-2, 110, 214
see also loan-relationship profits; trading profits
profits accounting definitions 20, 103, 109-10, 154
corporation tax buoyancy in the UK 15
corporation tax fiscal drag in the UK 19-20
modelling corporation tax revenue, importance of 5, 6
size 19, 220-221
volatility 6
see also declared profits; expected future profits; gross profits; loan-relationship profits; modelling the distribution of profits in the UK; negative profit growth; net taxable profits; profit distribution; profit growth; profit growth rate; profit shifting; profit sources; proportion of investment to total current-plus-lagged profits; proportion of losses used as group relief to offset profits; proportion of profits declared; real profit responses; trading profits; weighted average of current and previous profits; zero profits, in accounting definition of declared profits
progressive taxes 18
proportion of deductions declared
behavioural responses to corporation tax rate changes 80, 81, 82, 88, 89, 90, 91, 92-3
decomposing behavioural elasticities 180, 181, 183
propotional of investment to total current-plus-lagged profits 153
proportion of losses used as group relief to offset profits 139, 140, 141, 142, 143, 144-6
proportion of profits declared
behavioural responses to corporation tax rate changes 80, 81, 82, 84, 89, 90, 91, 92-3
behavioural responses to corporation tax rate changes over the economic cycle 96
decomposing behavioural elasticities 180, 181, 183, 184
public debt 7
public expenditure demand, and importance of corporation tax revenue 5, 9, 219
Puerto Rico 88
qualifying expenditures
behavioural responses to corporation tax rate changes 80-81, 82, 83-5, 89, 90-93, 217
decomposing behavioural elasticities 182, 183-4
simple corporate tax model 172
qualifying expenditures to gross profits ratio 81, 89, 90-93
‘race to the bottom,’ corporation tax rates in OECD countries 6
real deductions responses
aggregate declared profit response simulations 191-2
behavioural responses to corporation tax rate changes 82, 90, 91, 92-3
simulation 204, 205, 206
decomposing behavioural elasticities 180, 181, 182-3, 184
real employment responses 190-191
real investment responses 88-9, 169, 189-90
real profit responses
aggregate declared profit response
simulations 191-2
behavioural responses to corporation tax rate changes 82, 83-4, 89-90, 91, 92
simulation 204-6
decomposing behavioural elasticities 180, 181, 182, 184
US 88-9
real responses
aggregate declared profit response simulations 190-192
behavioural responses to corporation tax rate changes 61, 82
costs 82
decomposing behavioural elasticities 180, 181, 182-3
defined 49, 75, 80, 217
domestic firms 76
multinational corporations 76, 88–9, 169, 190–191
qualifying expenditures 80–81, 83–4, 89
US 88–9, 190–191, 192
see also real deductions responses;
real employment responses; real investment responses; real profit responses
recessions see economic cycles; global recession (2008–2010)
research and development tax credits 78–9
Rice, E.M. 76, 88–9, 169, 188, 189
Saez, E. 83, 181–2
sensitivity analysis, behavioural
responses of firms to corporation tax rate changes simulation 199–207
shareholders 5
single corporation tax rate
corporation tax rates 161–2
corporation tax revenue elasticity 27
fiscal drag 19
net taxable profit composition 78
simple corporate tax model 171–9
single firms
corporation tax revenue elasticity 27–9
decomposing behavioural elasticities 179–85
simulation procedures, in aggregate
corporation tax revenue elasticity simulations 150, 152, 163–5, 156
see also corporation tax loss asymmetries in a single corporation with more than one profit source; modelling deductions of single firms in the UK
Slemrod, J. 75, 76, 82, 88, 169, 188, 190
small firm corporation tax rate 19, 161–2, 215
small firms 19, 37, 161–2, 185, 215
social welfare, and importance of modelling corporation tax revenue 5
Sorensen, P.B. 7–8
stochastic profit growth, and behavioural
responses of firms to corporation tax rate changes simulation 201–3, 221
'stranded' losses and corporation tax loss asymmetries 47–8, 57
and modelling deductions of firms in groups in the UK 136, 137, 138, 139
tax allowances as profit offsets see deductions
tax base growth 18
see also corporation tax base
tax buoyancy 13, 15
see also corporation tax buoyancy
tax codes
behavioural responses to corporation tax rate changes 80, 82, 84, 106, 216, 218
simulation 197
corporation tax loss asymmetries 72, 106, 170, 187, 216, 218
over the economic cycle 65, 216
in a single corporation with more than one profit source 52, 53, 56
decomposing behavioural elasticities 184
modelling deductions of single firms in the UK 131
tax credits 19, 78–9
tax havens 88, 189
tax laws 195
tax revenue elasticity 14, 18
see also corporation tax revenue elasticity
time delays 13, 47–8, 49, 103
time periods
aggregate corporation tax revenue elasticity simulations 150, 151–5
corporation tax loss asymmetries in a single corporation with more than one profit source 51–2, 53–4, 55, 56–9
distribution of profits in the UK 111, 122–5
modelling deductions of firms in groups in the UK 135–6, 137–9, 144–6
modelling deductions of single firms in the UK 128–30, 131, 132–3
see also economic cycles; time delays
trading loss pools
modelling deductions of firms in groups in the UK 137, 140, 141, 142, 143, 144, 145, 146
modelling deductions of single firms in the UK 130, 132, 133
trading losses
distribution of profits in the UK 112, 121–2
modelling deductions of firms in groups in the UK 134–5, 137, 139, 140, 141, 142, 143, 144, 145, 146
modelling deductions of single firms in the UK 130, 131, 132, 133
trading profits
aggregate corporation tax revenue elasticity simulations 150, 151, 153, 158
aggregate declared profit response simulations 186
modelling deductions of firms in groups in the UK 134–5, 137, 139, 140, 141, 142, 143, 144, 145, 146
modelling deductions of single firms in the UK 127–30, 131, 132, 133, 225–30
transfer pricing 50
two corporation tax rates
corporation tax revenue elasticity in the UK 34, 35, 36, 37–8
small company rate elimination in the UK 161–2
UK 19, 51

UK
capital allowances 95, 129, 175
corporation tax buoyancy 14–18
corporation tax fiscal drag 17, 19–20
corporation tax loss asymmetries 47, 48, 79, 103, 170, 173, 187
corporation tax rates 19, 34, 35, 36, 37–8, 51, 161–2, 168
corporation tax revenue 14–18, 167–8, 203
declared deductions to declared profits ratio 92
economic cycles and aggregate corporation tax revenue elasticity 40, 41
fiscal depreciation rules 129, 172
global recession and corporation tax receipts 10, 11–12
large tax-paying firms 161, 203
net to gross profit ratio 170
profit growth 192–3
profit shifting 88, 188
profit size 19, 220–221
public debt and corporation tax rates 7
tax schedule and corporation tax revenue elasticity 34–8
see also modelling the distribution of profits in the UK

US
corporation tax loss asymmetries 48–9, 56, 72, 79, 103, 170
declared deductions to declared profits ratio 92
effective average tax rate (EATR) changes 48–9, 72, 94, 103, 170
global recession and corporation tax receipts 10
profit shifting 88–9, 94, 189–91, 192, 209
public debt and corporation tax rates 7
real responses 88–9, 190–191, 192
volatility
aggregate corporation tax revenue 6, 9–13, 14, 15, 23, 167, 213, 219–20
aggregate corporation tax revenue elasticity 42–5, 215
corporation tax buoyancy in the UK 15, 17, 18
corporation tax revenue from large firms in the UK 203
weighted average of current and previous profits 129
Yitzhaki, S. 75
Young, A. 47, 53
zero net profits
behavioural responses to corporation tax rate changes 83, 98
corporation tax revenue elasticity 29
modelling deductions of firms in groups in the UK 136, 137, 140, 141, 142, 143, 144, 145, 146
modelling deductions of single firms in the UK 133
zero profits, in accounting definition of declared profits 193