### Index

<table>
<thead>
<tr>
<th>Term</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>absolute growth</td>
<td>10–11, 20</td>
</tr>
<tr>
<td>Acemoglu, D. et al.</td>
<td>3</td>
</tr>
<tr>
<td>acquisitions</td>
<td>94, 101, 150</td>
</tr>
<tr>
<td>and competition between firms</td>
<td>125</td>
</tr>
<tr>
<td>conglomerate mergers</td>
<td>104, 124–5</td>
</tr>
<tr>
<td>and diversification</td>
<td>122, 124</td>
</tr>
<tr>
<td>and FDI</td>
<td>126, 127</td>
</tr>
<tr>
<td>and financial performance</td>
<td>105</td>
</tr>
<tr>
<td>vs internal growth</td>
<td>124–5, 147</td>
</tr>
<tr>
<td>Acs, Z. and D. Audretsch</td>
<td>131</td>
</tr>
<tr>
<td>Adamic, L. and B. Huberman</td>
<td>22, 23</td>
</tr>
<tr>
<td>advertising</td>
<td>86, 87, 91, 97</td>
</tr>
<tr>
<td>age distribution</td>
<td>20–22</td>
</tr>
<tr>
<td>agency theory</td>
<td>58, 103, 121</td>
</tr>
<tr>
<td>Aghion, P. and P. Howitt</td>
<td>77</td>
</tr>
<tr>
<td>Akerlof, G.</td>
<td>54</td>
</tr>
<tr>
<td>Alchian, A.</td>
<td>105–6</td>
</tr>
<tr>
<td>Allen, F. et al.</td>
<td>132</td>
</tr>
<tr>
<td>Almus, M.</td>
<td>11, 88, 92</td>
</tr>
<tr>
<td>Almus, M. and E. Nerlinger</td>
<td>41, 46</td>
</tr>
<tr>
<td>Amaral, L.</td>
<td>29–30, 44, 45</td>
</tr>
<tr>
<td>Amihud, Y. and B. Lev</td>
<td>113, 121</td>
</tr>
<tr>
<td>Amirkhalkali, S. and A. Mukhopadhayay</td>
<td>41, 95</td>
</tr>
<tr>
<td>Andriani, P. and B. McKelvey</td>
<td>137</td>
</tr>
<tr>
<td>Angelini, P. and A. Generale</td>
<td>17</td>
</tr>
<tr>
<td>Ansoff, I.</td>
<td>114, 120, 125, 126</td>
</tr>
<tr>
<td>antitrust</td>
<td>91, 121, 122, 150</td>
</tr>
<tr>
<td>Aoki, M.</td>
<td>112</td>
</tr>
<tr>
<td>appreciative theorizing</td>
<td>13, 111, 146</td>
</tr>
<tr>
<td>Arabsheibani, G. et al.</td>
<td>61</td>
</tr>
<tr>
<td>Ashton, T.</td>
<td>25</td>
</tr>
<tr>
<td>Audretsch, D.</td>
<td>4, 39, 42, 86, 93, 114, 131</td>
</tr>
<tr>
<td>Audretsch, D. and J. Elston</td>
<td>55</td>
</tr>
<tr>
<td>Audretsch, D. and T. Mahmood</td>
<td>90, 93</td>
</tr>
<tr>
<td>Austria</td>
<td>41, 46</td>
</tr>
<tr>
<td>Autio, E. et al.</td>
<td>128</td>
</tr>
<tr>
<td>autocorrelation dynamics</td>
<td>36</td>
</tr>
<tr>
<td>Axtell, R.</td>
<td>15, 22, 23</td>
</tr>
<tr>
<td>Baily, M. et al.</td>
<td>63, 65</td>
</tr>
<tr>
<td>Baily, M. and D. Farrell</td>
<td>65, 73, 108</td>
</tr>
<tr>
<td>Barnett, S. and P. Sakellaris</td>
<td>53</td>
</tr>
<tr>
<td>Barney, J.</td>
<td>103</td>
</tr>
<tr>
<td>Barron, D. et al.</td>
<td>41, 85, 109</td>
</tr>
<tr>
<td>Bartelsman, E. et al.</td>
<td>17, 18, 62, 95, 134</td>
</tr>
<tr>
<td>Bartelsman, E. and M. Doms</td>
<td>64</td>
</tr>
<tr>
<td>Batsch, L.</td>
<td>120</td>
</tr>
<tr>
<td>Baumol, W. et al.</td>
<td>9–10, 103</td>
</tr>
<tr>
<td>Becchetti, L. and G. Trovato</td>
<td>43</td>
</tr>
<tr>
<td>Beck, T. et al.</td>
<td>90, 91, 95–6, 98, 131</td>
</tr>
<tr>
<td>Bellone, F. et al.</td>
<td>131</td>
</tr>
<tr>
<td>Berger, P. and E. Ofek</td>
<td>123</td>
</tr>
<tr>
<td>Bhagat, S. et al.</td>
<td>122</td>
</tr>
<tr>
<td>Bigsten, A. and M. Gebreeyesus</td>
<td>42, 85</td>
</tr>
<tr>
<td>Birch, D.</td>
<td>11, 129</td>
</tr>
<tr>
<td>Birley, S. and P. Westhead</td>
<td>94</td>
</tr>
<tr>
<td>Bloom, N. and J. Van Reemen</td>
<td>77</td>
</tr>
<tr>
<td>Blundell, R. et al.</td>
<td>52, 53, 60</td>
</tr>
<tr>
<td>Boeri, T. and U. Cramer</td>
<td>46</td>
</tr>
<tr>
<td>Bond, S. and C. Meghir</td>
<td>53, 55</td>
</tr>
<tr>
<td>Bond, S. et al.</td>
<td>53, 55, 60</td>
</tr>
<tr>
<td>booms and recessions</td>
<td>28–9, 94</td>
</tr>
<tr>
<td>Boone, J. et al.</td>
<td>87</td>
</tr>
<tr>
<td>‘born global’ firms</td>
<td>127, 150</td>
</tr>
<tr>
<td>Bottazzi, G. et al.</td>
<td>6, 15, 16, 25, 26, 27, 42, 44, 46–7, 57, 64, 79, 95</td>
</tr>
<tr>
<td>Bottazzi, G. and A. Secchi</td>
<td>16–17, 19, 26, 28, 30, 36, 41, 44, 45, 46, 86, 95, 115, 147</td>
</tr>
<tr>
<td>bounded rationality</td>
<td>5, 54, 56–7, 61</td>
</tr>
<tr>
<td>Brock, W.</td>
<td>146</td>
</tr>
<tr>
<td>Broekel, T. (and Coad)</td>
<td>73</td>
</tr>
<tr>
<td>Bronars, S. and D. Deere</td>
<td>112</td>
</tr>
<tr>
<td>Brouwer, E. et al.</td>
<td>82</td>
</tr>
<tr>
<td>Brown, C. and J. Medoff</td>
<td>132</td>
</tr>
<tr>
<td>Brynjolfsson, E. and L. Hitt</td>
<td>3</td>
</tr>
<tr>
<td>Buldyrev, S. et al.</td>
<td>28</td>
</tr>
<tr>
<td>Cabral, L. and J. Mata</td>
<td>17</td>
</tr>
<tr>
<td>Calvo, J.</td>
<td>41, 98</td>
</tr>
</tbody>
</table>

191
The growth of firms

Camerer, C. and D. Lovallo 61
Campa, J. and S. Kedia 123
Canada 18, 55
Carden, S. 77
Carpenter, R. and B. Petersen 55
Catley, S. and R. Hamilton 89, 90
Caves, R. 43, 46, 131, 144
Caves, R. and M. Porter 86
Cefis, E. et al. 43, 101
Cefis, E. and L. Orsenigo 77
Central Limit Theorem 44
Chandler, A. 3, 4, 122
Chapin, F. 136–7
Chesher, A. 20, 43, 46
Chile 64
Chirinko, R. 51, 52, 53
Churchill, N. and V. Lewis 139, 140
Coase, R. 100
cognitive leadership 139
Colombo, M. and L. Grilli 10
competition 30–31, 37, 93
competitive advantage 4, 5, 103, 124
and employment growth 87
and game theory 86
and growth by acquisition 125
and profits 65
and size of firm 86, 91
and small firms 86, 131–2
conglomerate mergers 104, 124–5
Cooper, R. et al. 28
copy EXACTLY! policy 118–19
Cordes, C. et al. 114, 139
corporate refocusing 120–21
Corsino, M. 79
Côte d'Ivoire 41, 64, 85, 90, 95
credit market imperfections 55
Cressy, R. 62
Cromie, S. 90
Cummins, J. et al. 55
Das, S. 85
Davidsson, P. et al. 124, 129, 135, 147
Davis, S. et al. 11, 94, 129
De Fabritis, G. et al. 44
de Jong, J. and O. Marsili 94
de Meza, D. and D. Webb 62
de Wit, G. 20, 22
Degryse, H. and A. de Jong 59
Del Monte, A. and E. Papagni 79
Delmar, F. 9, 10, 69, 94, 124, 129
Delmar, F. and J. Wiklund 136, 151
Denmark 18, 26, 85, 95, 97
developing countries 88–9, 92, 114, 131
see also individual countries
Dickerson, A. 105, 125
Dierickx, I. and K. Cool 102
Disney, R. et al. 66, 67
diversification 3, 91, 104, 105, 122–3,
124, 126–8
growth strategies 112–13, 114,
117–18, 119–23
and management 105
and risk reduction 121–2
Dixit, A. 86, 112
Dixon, R. 31–2, 117, 149
Dobson, S. and B. Gerrard 69
Doms, M. et al. 28, 64, 82, 147
Dosi, G. 6, 16, 57, 106, 148
Dosi, G. et al. 5, 16, 106
Dosi, G. and M. Grazzi 5
Dosi, G. and D. Lovallo 61
Doukas, J. and O. Kan 123
Downie, J. 106
downsizing 3, 63–4, 107
Droucopoulos, V. 42
Druilhe, C. and E. Garnsey 140
Dunne, P. and A. Hughes 41, 44, 45, 95
Dunne, T. et al. 18, 41, 62, 85, 90, 147
economies of growth 102, 103, 113,
114, 135, 145
economies of scale 2–3, 44, 69, 112,
135, 149
Eisenhardt, K. and J. Martin 102, 103
Eisenhardt, K. and C. Schoonhoven 10
employment levels 9, 10–11, 18, 28
and competition between firms 87
and employee behaviour 116
growth propagation 32–7
and innovation 76, 81–3
and sales growth 58, 70, 71–2
and uncertainty 92
and worker morale 112
entrepreneurial characteristics 88–90
entry rates 86, 108, 131
and competitive advantage 112
entry costs and internal growth 124
excess of new firms 61–2
failure rate 62
and FDI 127
and job creation 129
and productivity 64, 65, 66, 67, 68, 134
survival 93, 95, 133, 134
Erickson, T. and T. Whited 53–4
Erisson, R. and A. Pakes 134–5
Ethiopia 42, 85
Euler equation model 52–3, 60
Evangelista, R. and M. Savona 82
Evans, D. 41, 44, 85, 95
evolutionary economics 6–7, 105–8
evolutionary theory of growth 56–9, 60, 61, 63
exit rates 56, 92
and diversification 123
exit hazards 86, 90, 106, 133, 134, 155–6
and productivity 63, 64, 65, 66, 68
small firms 40–41, 43, 129, 133, 142
survival of the fittest 7, 107–8, 144
exporting 4, 91, 126–8
Fagiolo, G. and A. Luzzi 59, 60, 90, 98
family-owned firms 113, 114
Fazzari, S. et al. 51, 53, 54–5, 59, 60
FDI 4, 126–7
Feldman, M. 102
financial constraints
capital intensity and growth 90–91
evaluating importance of 59–62
and profits, productivity and firm
growth 54–5, 58
and selection effects on profits
50–63
small firms 17, 62, 132, 136
‘financial pecking-order’ theory 58
Finland 18
Fishman, A. and R. Rob 88
Fizaine, F. 85
Fleck, J. 81
Fluck, Z. and A. Lynch 123
Foster, L. et al. 64, 65–6, 67, 68, 131
France 18, 50–51, 82, 85, 90, 95
growth rate distribution in
manufacturing 14, 15, 17, 26–8,
42, 44, 46, 57, 71, 98, 107, 113
Freel, M. 79, 81
Freeland, R. 107
Friedman, M. 11
future research
 discrete growth events, impact of
147
econometric investigations into firm
growth 147
firm-specific variables 144
Gibrat’s law 148
growth and ‘fitness’, relationship
between 144
inter-firm competition 87
investment, lumpy nature of 38
performance and ambition 144
profits, productivity and firm growth
75
theoretical perspective on firm
growth 145–6
VAR models of firm growth 70
Gabe, T. and D. Kraybill 41, 93, 95
Galeotti, M. et al. 53, 55
game theory 86
Garnsey, E. 2, 40, 47, 134, 140
Gartner, W. 149
Gaussian distribution 26, 29
GDP 96
Germany 18, 46, 55, 79, 82, 88, 90, 92, 95
growth rates of manufacturing firms
41, 46, 82, 97
Geroski, P. 77, 86, 96, 108
Geroski, P. et al. 28, 46, 53, 79, 97, 101
Geroski, P. and K. Gugler 25, 37, 43,
85, 87, 90, 91, 94, 97, 144
Geroski, P. and S. Machin 78
Geroski, P. and M. Mazzucato 46
Geroski, P. and S. Toker 78–9, 91, 93, 97
Gibrat’s law 7, 14, 17–20, 29, 39–48,
147–8
autocorrelation of growth rates 45–7
and business cycles 94
econometric issues 43
and economies of scale 44
firm size and average growth 40–43,
53, 85
firm size and growth rate variance
43–5
heterogeneous growth and
autocorrelation patterns 47
and independent sub-markets 45
The growth of firms

and Kolmogorov–Smirnov tests 47
model of random growth shocks 22–3
and negative dependence of growth on size 42, 43–4
and neoclassical optimizing models 101
objections to 20
and relevant lags 46
and sample selection bias 43
scaling of growth rate variance 44–5
and services sector 42
as stochastic process 115
Gilchrist, S. and C. Himmelberg 55
GMM (Generalized Method of Moments) techniques 70
Goddard, J. et al. 41, 46
Goedhuys, M. and L. Sleuwaegen 41, 64, 80, 85, 90, 92, 95
Goergen, M. and L. Renneboog 59
Gomes, J. 54
government schemes 4, 59, 62, 90
Grabowski, H. et al. 4
Graham, J. et al. 123
Greenhalgh, C. et al. 82
Greiner, L. 84, 115, 138
Griliches, Z. 77
Griliches, Z. and J. Mairesse 5
Griliches, Z. and H. Regev 64
growth advantages of 112–13
and age of firm 84–5
aspirations 2, 88, 89, 92, 136
attitudes to 111–17
between-plant reallocation 66–8
and capital intensity 90–91
and centrality of network 91
and competition 93
and conglomerate merger 104, 124–5
control-loss argument 113
coordination problems 113
copy EXACTLY! policy 118–19
desirability of 112–15
determinants 96–9
disadvantages of 113–15
and diversification see diversification and exports 4, 91, 126–8
and external business advice 92
and ‘growth of the fitter’ 7, 107–8, 144
growth rate distribution 25–38
growth rate distribution, heavy-tailed nature 25, 26, 28, 29, 34, 36, 86–7
industry-specific factors 92–4
inherent tendency towards 115–16
and innovation see innovation intentionality of growth 115–17
and inter-firm partnerships 91
internal 116, 124–5
and investment spikes 37–8
Laplace distribution 25–6, 28, 30, 32
macroeconomic factors 94–6
and managerial resources 102, 112–14, 115, 116–17, 119–20, 121, 125, 138–9
modelling stages of 137–41
and nature of firm activities 91
as ongoing process 70
and ownership structure 90
and population ecology 108–9
R² values 96–9
reduced form models 59, 60
relative 10, 11, 66
spurts 29–37
strategies 111–28
tent-shaped’ distribution 6, 25, 26, 27–8
time-varying moments 28–9
VAR models of firm growth processes 69–73
very large firms 95
Guariglia, A. 51, 55
Guiso, L. and G. Parigi 92

Hadlock, C. 55
Halebian, J. and S. Finkelstein 150
Hall, B. 28, 41, 43, 44, 76, 82, 95
Hannan, M. 32, 108, 109
Hannan, M. and J. Freeman 108, 109, 137, 141
Harada, N. 133
Hardwick, P. and M. Adams 42, 91, 94, 108
Harhoff, D. et al. 43, 44, 90, 97
Harrison, R. et al. 82
Hart, P. 14, 41
Hart, P. and N. Oulton 42, 44
Hart, P. and R. Pearce 95
Hay, D. and D. Morris 112
Hayashi, F. 51–2
Headd, B. 133, 134
Headd, B. and B. Kirchhoff 93, 133–4
diagram of firm 3, 32–5
high-profit firms and business opportunities, lack of interest in 107
Higson, C. et al. 29, 94
Hines, J. and R. Thaler 58
Hisrich, R. and S. Ozturk 90
Holl, P. 91, 104–5
Hopenhayn, H. 106, 134
Hoshi, T. et al. 55
Hu, X. and F. Schiantarelli 55
Hubbard, R. 51
Huberman, B. and L. Adamic 22, 23
Hughes, A. 62, 132
Hugo, O. and E. Garnsey 140
human capital 54, 88–9
Hyland, D. and J. Diltz 121
Hymer, S. and P. Pashigian 43
Idson, T. and W. Oi 131
Ijiri, Y. and H. Simon 16, 29, 30, 45, 115, 147–8
imperfect markets theory 54–6, 59, 60
India 20, 21, 85, 89, 131
Indonesia 89
industrial classification scheme 94
innovation and economic performance 77–8
and employment growth 76, 81–3
failed attempts, outcome of 80–81
and industrial classification schemes 94
industry-specific factors 93
measurement methods 79–80
profit margins 78
sales growth 76, 77–81
small firms 77, 131
technological unemployment 82–3
and uncertainty 77–8, 80
see also R&D
investment and cash flow 54–6, 58, 59, 60
plant-level 28
and productivity growth relationship 38
and profit, relationship between 51
R&D 73, 78–9, 82
spikes 37–8
and uncertainty 92
Ireland 79
Italy 18, 42–3, 55, 79, 82, 90, 92, 95, 114
growth rate distribution in manufacturing 17, 26, 43, 44, 46, 57, 64, 73, 79, 90, 98, 107
Japan 41, 46, 55, 85, 87, 95
Jensen, M. 20, 26, 54, 58, 122, 125
Jensen, M. and W. Meckling 103
Johanson, J. and J. Vahlne 127
Johnson, P. et al. 42
Jones, M. and N. Coviello 129
Jovanovic, B. 106, 134
Kaldor, N. 70, 113
Kalecki, M. 20
Kay, N. 101
Kazanjian, R. and R. Drazin 140–41
Kesten, H. 22
Klette, T. and Z. Griliches 77
knowledge, tacit knowledge transfer 118, 126, 127
Kogut, B. and U. Zander 127
Kuemmerle, W. 128
Kumar, M. 41, 45, 95, 97
labour productivity growth 63–4, 71–3
Lamont, O. 55
Lang, L. and R. Stulz 123
Laplace distribution 25–6, 28, 30, 32
learning-by-doing 66, 67, 102
Lee, Y. et al. 44
legal status 90
Leiponen, A. and I. Drejer 94
Lensink, R. et al. 92
Lerner, J. 62
Levenson, A. and K. Willard 62
limited liability companies 85, 90, 95, 150
Little, I. 9–10, 25, 62, 131
Liu, J. et al. 41, 64, 85, 90, 97, 98
Lockett, A. et al. 124, 147
lognormal distribution 14, 16, 20, 101
Lotti, F. and E. Santarelli 17
Lotti, F. et al. 39, 42–3
Lucas, R. 101
Luttmer, E. 22

McCombie, J. 70
MacDonald, C. 118, 119
McDougall, P. et al. 127, 128
McKelvey, B. and P. Andriani 29, 36, 86, 137
McPherson, M. 41, 43, 88, 89, 94, 95, 97, 98
Maksimovic, V. and G. Phillips 64, 93–4, 123, 124, 125, 147
management
cognitive leadership 139
control and small firms 105
and diversification 105
entrenchment 121
incentives 104, 121
pursuit of growth 58, 69, 70, 104
resources 3, 54, 91, 102, 112–14, 115, 116–17, 119–20, 121, 125, 138–9
shareholder-wealth-maximizing managers 59–61
talent distribution and small firms 101
theory of the firm 103–5
Mansfield, E. 19, 40, 42, 77–8, 147
manufacturing industries see under individual countries
market
concentration 93
power 107
selection 61
value 4, 51, 52, 53, 57, 76, 97
Markides, C. 123
Marris, R. 4, 5, 58, 103–5, 119, 125
Marshall, A. 132–3
Marsili, O. 16, 43, 94, 96
Martin, J. and A. Sayarak 122
Matia, K. et al. 44, 45
Matsusaka, J. 123
Mead, D. and C. Liedholm 88–9
mergers and acquisitions see acquisitions
Metcalfe, J. 76, 106
Miner, J. et al. 136
Minimum Efficient Scale (MES) 41, 93
Minkoff, M. 109
Mitzenmacher, M. 22
Montgomery, C. 102–3, 121, 122, 123
motivation, lack of, in larger firms 114, 117
Mowery, D. 42, 78
Mueller, D. 104, 119, 125
multiplant firms 68, 90, 96, 97, 98
Myers, S. 58
Nafziger, E. and D. Terrell 131
Nelson, R. 114
Nelson, R. and S. Winter 5, 77, 106, 111, 146
neoclassical economics 7, 8, 61, 62, 63, 69, 145
‘optimal size’ 56, 60, 100–101, 102, 103, 107, 112, 145
q-theory 51–4, 55, 57, 59, 60, 117
Netherlands 18, 42, 92, 114
networks 91, 126
Niefert, M. 82
O’Farrell, P. and D. Hitchens 136
Oliner, S. and G. Rudebusch 55
‘optimal size’ theory 56, 60, 100–101, 102, 103, 107, 112, 145
organizational
change 3, 5, 11, 112, 114, 141
slack 31, 32, 70
Oviatt, B. and P. McDougall 128
ownership structure 90
Pareto distribution 16, 22–3, 28
Parkinson, C. 115–16
partnership, inter-firm 91
patents 77, 78, 79–80, 82, 97
Paulrê, B. 121
Pavenik, N. 64
Pavitt, K. 131
Penrose, E. 4, 31, 32, 47, 69, 91, 111, 119–20, 131, 135, 145–6, 148
theory of growth of firm 102–3, 113, 116–17
pharmaceutical industry 16–17, 41, 43, 44, 45, 46, 79
Phillips, B. and B. Kirchhoff 22, 42, 133
population ecology 108–9
Index

Portugal 17, 18
Powell, W. et al. 91
Power, L. 38
Prais, S. 14, 41
process theory of internationalization 127
production
Minimum Efficient Scale and growth rates 41
objectives 112–13
productivity
and growth 63–5, 71–3
growth, decomposing 65–8
relative 63–8
profits
and competition 65
and diversification 123
and growth, financial constraints and selection effects 50–63
innovation and firm growth 78
and investment, relationship between 4, 5, 10, 51
and productivity 57–8
q-theory 51–4, 55, 57, 59, 60, 117
Quandt, R. 16
R&D 3, 4, 6, 54, 56, 73, 74, 78–80, 82, 120, 123, 126, 131, 135
see also innovation
R^2 values 96–9
Radice, H. 91
Rajan, R. and J. Wulf 3
Ramsden, J. and G. Kiss-Haypal 16
Rao, R. (and Coad) 37, 57, 73, 74, 76, 79–80, 82, 145, 147, 150
reallocation 6, 49, 65, 66–8, 144
Reed, W. 22
regional effects 95
Reichstein, T. and M. Dahl 85, 95, 97
Reichstein, T. and M. Jensen 20, 26
relative growth 10, 11
replication 117–19
replicator dynamics 106
resources
and growth 102–3
sharing 93
risk reduction, and diversification 121–2
Rivkin, J. 118
Roberts, J. 112
Robson, P. 79, 81
Robson, P. and R. Bennett 51, 85, 88, 91, 92, 97, 132
Robson, P. and B. Obeng 88, 89
Roll, R. 125
Roper, S. 79
Rossi-Hansberg, E. and M. Wright 16, 42, 90–91
Rumelt, R. 123
sales growth 9, 28, 29, 93
and ‘growth of the fitter’ 7, 107–8, 144
and innovation 76, 77–81
Salop, S. 86
Salter, W. 38
Samuels, J. 41
Santarelli, E. and M. Vivarelli 17, 61, 131
Sapienza, H. et al. 128
Sarno, D. 59, 132
Sastry, M. 141
Schaller, H. 53, 55
Schifer, F. 74, 78
Schiantarelli, F. 51, 53, 55
Schivardi, F. and R. Torrini 92, 114
Schumpeter, J. 3, 87, 105
Secchi, A. 6, 16–17, 19, 26, 28, 30, 36, 41, 44, 45, 46, 86, 95, 115, 147
Segarra, A. et al. 20, 21
Segarra, A. and M. Callejon 41
selection
bias 1, 43
and conglomerates 64
and differential growth 65, 106, 107, 108, 144
and financial constraints 50–63
service industry 18, 42, 81, 82, 85, 90, 112, 118, 120, 127
sex, and entrepreneurial characteristics 89–90
Shanmugam, K. and S. Bhaduri 85
Shepherd, D. and J. Wiklund 10, 69, 89, 136
Shleifer, A. and R. Vishny 121, 122, 125, 150–51
The growth of firms

Silberman, I. 16
Simon, H. 12, 16, 29, 30, 31, 33, 45, 56–7, 115, 147–8
Simon, H. and C. Bonini 14
Simons, T. and P. Ingram 109
Singh, A. and G. Whittington 41, 45
Singh, S. et al. 89
size distributions 14–24
lognormal model 14, 16, 17
size threshold 114
upper tail shape problems 16, 22
Slater, M. 102
Sleuwaegen, L. and M. Goedhuys 41, 64, 80, 85, 90, 92, 95
small firms
advantages of 130–31
ambition, lack of 136
and cognitive leadership 139
and competition 86, 131–2
financial account structure 17, 62, 132, 136
growth desire 135–6
growth rates 41
hazard rates 140
independence of 136
and innovation 77, 131
and internal growth 124
and internationalization 127–8
and large firms, differences between 130–32
and large firms, growth pattern differences 132–7
and management control 105
and management talent distribution 101
and MES (minimum efficient scales) 72
modelling stages of firm growth 137–41
and negative autocorrelation 135
productivity levels 131, 134–5
regional effects 95
routinization of operations 140
and specialization 131
structural change in growing firms 136–7
survival struggle 133–5
and threshold effect 91–2
Smolny, W. 82
Sorensen, J. and T. Stuart 109
Southern Africa 41, 88, 89, 94, 95, 97
Spain 20, 21, 41, 98
specialization 5, 95, 131
Spiezia, V. and M. Vivarelli 81
Srholec, M. and B. Verspagen 94
Stam, E. and E. Garnsey 140
Stanley, M. et al. 16, 25
Starbuck, W. 8, 113, 148, 149
Steindl, J. 14–16
Stiglitz, J. and A. Weiss 54, 90
Storey, D. 10, 90
structure–conduct–performance paradigm 92
Subbotin distribution 26
survival rates 20, 93, 95, 133–5
Sutton, J. 29, 37, 42, 45, 87, 115
Sweden, growth by acquisition 124
Szulanski, G. and S. Winter 118
Taiwan 41, 64, 85, 90, 97
Tamvada, J. 20, 21, 89
taxation 55, 92, 113, 114
technological progress 1, 3–4, 20, 92–3
Teece, D. 103
Teruel-Carrizosa, M. 42
Tether, B. 114
theoretical perspectives 100–110
threshold effect 91–2, 114
Tobin’s q 51–4, 55, 57, 59, 60, 117
transaction costs theory 3, 100–101, 126
Tsoukas, H. and R. Chia 141
Tybout, J. 92, 114
UK
advertising and sales growth 91
cash flow and investment 55
employment growth and innovation 82
excessive start-ups 61, 62
financial structure of small firms 132
firm growth and age of firms 85
firm growth and business cycles 94
firm growth and human capital 88
firm growth of large firms 95
firm growth and management characteristics 91
growth rates of life insurance companies 42, 108
growth rates of manufacturing firms 41, 42, 45, 46, 67, 79, 82, 97, 107, 132
high-tech firms and lack of desire for growth 114–15
innovation and small firms 131
profit rates and management control 104–5
R&D investment 78–9, 82
small firms 18, 51, 79, 85, 88, 91, 97, 114–15, 131, 132
software firms, limits to growth 114
time-varying moments of growth rate 29
uncertainty 5, 7, 92, 127
unionization 90, 112, 132
US
cash flow and investment 55
employment growth and innovation 82
firm growth and age of firms 85
firm growth and business cycles 94
firm growth and dispersion and volatility factors 94–5
firm growth of large firms 95
firm growth and ownership structure 90
firm growth and plant size 93
growth by acquisition 125
growth rates of manufacturing firms 14, 15, 16, 40, 41, 44, 45, 46, 54, 57, 67, 78, 82, 85, 107
growth rates of retail firms 67, 68
innovation and small firms 131
investment and productivity growth relationship 38
New York Credit Unions 41, 85, 109
oil company investment 55
plant-level investment and growth rate distribution 28
post-entry growth rates 95
R&D investment 73, 78, 82
size-wage relationship 132
small firms 18, 62, 90, 97, 129, 131, 133–4
survival rates of small firms 133–4
time-varying moments of growth rate 28, 29
van Dijk, M. and O. Nomaler 108
Van Reenen, J. 77, 82
VAR (vector autoregression) models of firm growth processes 69–73
Variyam, J. and D. Kraybill 42, 85, 90, 97
Villalonga, B. 123
Viner, J. 100
Vining, D. 16
wage levels 3, 132
Wagner, J. 41, 46
Weick, K. 70
Weick, K. and R. Quinn 32, 141
Weiss, C. 10, 41, 46
Wernerfelt, B. 102
Whetten, D. 11, 112, 113, 138, 141
White, H. 43
Whited, T. 37, 53–4, 55, 147
Wiklund, J. 10, 69, 86, 88, 89, 117, 134, 136
will-o’-the-wisp models 113, 149
Williamson, O. 33, 103, 113
Winter, S. 5, 6, 77, 103, 106, 111, 118, 146
Witt, U. 114, 139
Wynarczyk, P. and R. Watson 91
Yasuda, T. 41, 85
You, J.-I. 43, 101, 130
‘Yule’ distributions 14
Zahra, S. et al. 128
Zipf distribution 22, 23
Zollo, M. and H. Singh 150