Pro	eface	vii	
Acknowledgements			
Lis	List of tables		
Lis	at of figures	xvii	
1 1	Introduction		
	1.1 Background	1	
	1.2 Microsimulation as an alternative approach	4	
	1.3 Questions to be analyzed	6	
	1.4 Outline	8	
2 7	The firm in models of the economy		
	2.1 Introduction	10	
	2.2 Applied General Equilibrium modelling of competitive markets	11	
	2.3 Issues in the internal organization of the firm	19	
	2.4 Issues in the external organization of the firm.	31	
	2.5 Issues in industrial policy	37	
	2.6 Towards representing individual firms in models of the economy: microsimulation	39	
3 A	A model of routine decisions and realized outcomes		
	3.1 Introduction	46	
	3.2 Firm accounting and monitoring	47	
	3.3 Price and quantity decisions	52	
	3.4 Factor market	56	
	3.5 Product market	57	
	3.6 Distribution of sectoral outcomes over individual firms	60	
	3.7 Financial routine decisions and realizations	64	
	3.8 Tabulation of sectoral and national accounts	66	
	3.9 Concluding remarks	69	

4 A model of investment decisions	
4.1 Introduction	71
4.2 Alternative theories of the investment decision	72
4.3 An integrative model of the investment decision	74
4.4 Links to the model of routine decisions	83
4.5 Treatment of entry and exit	84
5 How the combined model works	
5.1 Introduction	85
5.2 Short run effects of a perceived shift in demand	86
5.3 Feedbacks and long run effects	95
5.4 Conclusions	99
6 Model application	
6.1 Introduction	101
6.2 Sectors and selection of firms	104
6.3 Operationalization of the model	130
6.4 Calibration of the model	141
6.5 Base run simulation	151
6.6 Concluding remarks	165
7 From micro to macro and back:	
Simulating the impact of changing sales expectations	
7.1 Introduction	167
7.2 The firm and the economy	168
7.3 Short run effects	169
7.4 Long run effects	174
7.5 Conclusions	177
8 From macro to micro and back:	
Simulation of the impact of investment subsidy policies	
8.1 Introduction	179
8.2 Implementation of investment subsidies in the model	182
8.3 Simulation experiments: uncompensated abolition of the WIR	183
8.4 Measuring the effectiveness of the WIR subsidy	191
8.5 Evaluation	194

	xiii	
9 Simulation of structural changes at the sector level		
9.1 Theoretical context	195	
9.2 Model implementation of entry	196	
9.3 Results	199	
9.4 Digression: the issue of exit	205	
9.5 Conclusions	205	
10 Summary and appraisal		
Appendix A List of symbols	215	
Appendix B Derivation of price and output reactions of the firm		
Appendix C Detailed analysis of the market shares equation	224	
Appendix D Parameters and initial values	235	
Appendix E On the difficulties of adapting AGE models to imperfect competition and heterogeneous behaviour of firms	244	
References	253	
Author index		
Subject index		

## List of tables

3.1: The firm accounting scheme	48
3.2: Monitoring indicators	52
3.3: The Input-Output table	67
3.4: Current accounts of institutions	67
3.5: SAM accounting scheme	69
6.1: Sector classification scheme	106
6.2a: Sectoral indicators, 1980, 1987. Breakdown of totals by sector(%)	107
6.2b: Average annual growth rates (%), 1980-1987 <sup>(a)</sup>	108
6.3: Firm names and ranks	109
6.4: Company profile Wessanen, 1989	111
6.5: Company profile Unilever group, 1991	112
6.6: Company profile Douwe Egberts, 1988/89	113
6.7: Company profile Heineken, 1989	114
6.8: Company profile DSM, 1990	116
6.9: Company profile AKZO, 1990	117
6.10: Company profile Gist Brocades, 1990	118
6.11: Company profile Nijverdal ten Cate, 1990	119
6.12: Company profile Hoogovens, 1990	120
6.13: Company profile Philips, 1989	121
6.14: Original accounts fit into the model's accounting framework	126
6.15: The selected companies versus sector aggregates	129
6.16: Estimates of the parameters of the size distribution	136
6.17: Example calculations for scaling factors in FOOD, 1981	137
6.18: Scaling factor and share of residual firm	138
6.19: Overview of starting values and parameters for each firm	144
6.20: Base run measures of fit by sector and firm	157
<b>6.21:</b> Gross value added at market prices by sector, 1980 and 1987	162
6.22a: Gross domestic product and expenditures (bln. Dfl)	164
6.22b: Gross domestic product and expenditures.	165
Average annual growth rates (%)	
7.1: Reaction patterns on 10% increase in sectoral sales expectations	171
and results for same firm. Percentage deviation from base run	
in same year	