

Contents

Preface	VII
List of Symbols	XIII
Abbreviations	XVI
1 Introduction and Outline of the Study	1
2 Background of the Study	5
2.1 The Demographic Development in the OECD between 1950 and 2050	5
2.1.1 The Development of Fertility Rates	6
2.1.2 The Development of Life Expectancies	7
2.1.3 The Development of the Overall Population and Population Growth	8
2.1.4 The Development of the Population Structure	9
2.2 The Economic Consequences of Aging Populations	13
2.2.1 Public Budgets	14
2.2.1.1 The Budget of the Pension System	14
2.2.1.2 The Budget of the Health Care System	17
2.2.1.3 The Government Budget	20
2.2.2 Individual Savings Decision and Capital Markets	22
2.2.3 Economic Growth	29
2.3 Methodological Considerations	32
2.3.1 Static Approaches	33
2.3.2 Global Macroeconomic Models	36
2.3.3 Overlapping Generations Models of the Auerbach-Kotlikoff Type	39
2.3.4 Approach Taken in this Study	42
3 Fiscal Systems in the OECD Countries	45
3.1 Public Pension Systems	45
3.2 Health Care Systems	48
3.3 Taxation	51
4 Modeling the World Economy	59

4.1	Population Dynamics	59
4.1.1	Basic Structure of the Model Population	59
4.1.2	Benchmark Population in the Year 2000	60
4.1.3	Population Projections until the Year 2050	62
4.1.4	Population Projections After the Year 2050	64
4.1.5	Summary	64
4.2	The Structure of the Economic Model	67
4.2.1	The Household Sector	68
4.2.2	The Production Sector	73
4.2.3	The Government Sector	76
4.2.3.1	The Consolidated Government Budget	77
4.2.3.2	The Budget of the Pension System	78
4.2.3.3	The Health Care System	79
4.2.3.4	The Disability Insurance System	80
4.2.4	Equilibrium Conditions	81
5	Calibration and Numerical Solution of the Baseline Transition Path	83
5.1	Parametrization of the Model	83
5.2	Solving the Model	88
5.3	Initial Equilibria and the Closed Economies' Baseline Transition Paths	90
5.3.1	The Initial Equilibria in the Year 2004	91
5.3.2	The Baseline Transition Paths	94
5.4	Initial Equilibrium and the World Economy's Baseline Transition Path	99
5.4.1	The Initial Equilibrium in the Year 2004 and the Baseline Transition Path	99
5.4.2	Generational Accounts in the Baseline Path	104
5.4.3	Leisure Shares in the Baseline Path	108
6	Interaction Between Demographic Changes and Economic Outcomes	111
6.1	The Impact of Fertility and Mortality Changes	111
6.1.1	Fertility Changes	115
6.1.2	Mortality Changes	123
6.1.2.1	Constant Life Expectancy in All Regions	123
6.1.2.2	Higher Life Expectancy in All Regions	124
6.2	Immigration Policies	125
6.2.1	Age-Specific Immigration in All Regions	127
6.2.2	Skill-Specific Immigration in the U.S. and the EU	138
6.2.3	Increased Immigration in All Regions	141
6.3	Conclusions	143

7	Reform Options for Public Pension Systems	145
7.1	Pension Reforms in the Light of Aging Populations	145
7.2	Simulation Results of Pension Reforms	149
7.2.1	Increasing the Effective Retirement Age in All Regions	149
7.2.2	Eliminating the Contribution Ceiling and Introducing a Flat Replacement Rate in All Regions	157
7.2.3	Eliminating the Contribution Ceiling and Introducing a Flat Basic Benefit in All Regions	160
7.2.4	Privatizing Public Pensions in the U.S.	162
7.3	Conclusions	164
8	International Tax Policies	167
8.1	The Economic Impact of Capital Income Taxation	167
8.2	Simulation Results of International Tax Reforms	171
8.2.1	Harmonization of the Corporate Tax Base	171
8.2.2	Harmonization of the Corporate Tax Rate	179
8.2.3	Harmonization of the Capital Tax Rate	181
8.2.4	Changing the Structure of Harmonized Corporate and Capital Tax Rates	182
8.2.5	Implementing a Consumption Tax Balanced Budget	183
8.3	Conclusions	185
9	General Summary	189
	Appendix	195
A.1	Important Indicators of the Population Model	195
A.2	Labor-Augmenting Technological Change in OLG Models	202
A.3	Calculation of Individual Consumption, Leisure and Children's Consumption	207
A.4	Derivation of the National Goods Market Equilibrium	212
	References	215
	Authors Index	225
	Subject Index	227