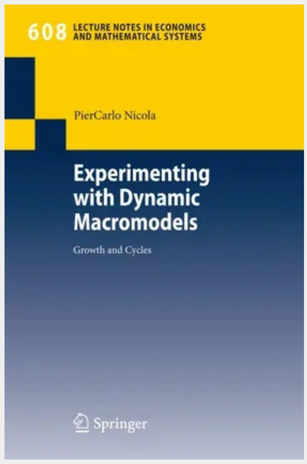
Nicola

Experimenting with Dynamic Macromodels

Growth and Cycles

This book presents a macroeconomic dynamic model à la Solow-Swan, including the market for labor, in a discrete time structure. The model is expanded to include expenditure on R&D and public expenditure on infrastructure. For each of the three models the results are shown in time series figures, which demonstrate that even small changes in the parameters produce responses in the time behavior of the main variables: from steady growth, to regular cycles, to chaotic-like time paths.

The main aim of this monograph is to demonstrate the power of combining mathematics with numerical experiments, using a computer, to understand the main determinants of the mobilization of a whole economy. To this end, andstartingfromSolow's1956model,weadd,insubsequentsteps,thelabour market,expenditureonresearchanddevelopment(R&D),andpublicexpen- ture oninfrastructures in orderto constructa more ?exible model that canbe analysed numerically through numerous computer simulations, to show (re- istically) how complex time paths can be. We do this by solving the model(s) for the main variables, gross income, labour employment, consumption, etc. Asthisisamonograph,nosystematicattemptismadetorelatethemodels presented to the literature; the assumption is that the interested reader has someknowledgeofpublishedworkonmacroeconomicgrowththeoryandbu- ness cycles. For example, the excellent and complete (as far as completeness can be achieved in a single book) work by Barro and Sala-i-Martin (2004), which contains many references, is a good study of growth theory; and the monograph by Gabisch and Lorenz (1987) is a good example of the work on business cycle models. Special treatment is reservedfor the labour market, since labour is a quite speci?c input, that di?ers from all other inputs. Labour may be supplied by familiesandcannotbe producedinthe usualmaterialsense,i.e.laboursupply is an exogenous variable in every economy.



53,49 €
49,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783540773962
Medium: Buch
ISBN: 978-3-540-77396-2
Verlag: Springer
Erscheinungstermin: 13.02.2008
Sprache(n): Englisch
Auflage: 1. Auflage 2008
Serie: Lecture Notes in Economics and Mathematical Systems
Produktform: Kartoniert
Gewicht: 890 g
Seiten: 265
Format (B x H): 155 x 235 mm