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Innovations in Macroeconomics

3rd Edition

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ISBN 978-3-642-11907-1 e-ISBN 978-3-642-11909-5
DOI 10.1007/978-3-642-11909-5
Springer Heidelberg New York Dordrecht London

Library of Congress Control Number: 2011934030

Cover design: estudio calamar, Berlin/Figueres

Springer is part of Springer Science+Business Media (www.springer.com)

Preface to the Third Edition

It is certainly unusual to have a book in its third edition within four years—I hope that this testifies to the growing interest in innovation dynamics on the one hand and on the other hand in finding better ways for macroeconomic modeling. I have benefited from encouragement from David Audretsch and several other colleagues; this particularly refers to the cooperation in a Jean Monnet Project where I have enjoyed fruitful discussions with Cillian Ryan and Andrew Mullineux, University of Birmingham. As regards the new chapter on the Transatlantic Financial Market Crisis I am also indebted to discussions with Werner Roeger and Jürgen Kröger, European Commission, Caroline Fohlin, Johns Hopkins University, Baltimore and Walter Eubanks, Congressional Research Service, Washington DC; the author also appreciates the debate at the Global Jean Monnet Conference/ECSA-World Conference 2008 "A Europe of Achievements in a Changing World"; Brussels, November 24-25, 2008. I am also grateful for technical support by Michael Agner, University of Odense and Mevlud Islami as well as Jens Perret, EIIW/Schumpeter School of Business and Economics at the University of Wuppertal. The new medium-term hybrid macro model presented in the first edition seems to be particularly useful in understanding the effects of the international banking crisis: Output is determined—via a modified version of Friedman's permanent income consumption hypothesis—by both short-term aggregate demand and by the anticipated long-run (steady state) income as derived from the neoclassical growth model. I have also included a chapter on financial innovations in this enlarged edition. The readers interested in a broader analysis of the international banking crisis are invited to take a closer look at the book *Transatlantic Banking Crisis and Sovereign Debt Dynamics. Explaining a Modern Disaster of the West* is suggested, but the offered reflections only give a new starting point in this field. The institutional innovations suggested here and presented at the Congressional Research Service, the European Commission, the University of Economics and Finance, St. Petersburg, and the Johns Hopkins University, Baltimore, in 2009 are part and parcel of innovative institutional reforms that seem to be necessary in a world economy with potentially unstable globalization dynamics. Last but not least, I am also grateful to the institutional network at the Schumpeter School of Business and Economics at the University of Wuppertal.

One of the final chapters look into a reformulation of the Marshall-Lerner condition for a world with foreign direct investment and comes up—compared to the standard approach—with rather different results for some parameter constellations. As foreign direct investment continues to grow relative to GDP in many countries, one should carefully consider the implications, namely that real depreciations of currencies will often only contribute to a change in the current account position to a limited extent; this is a point that has been emphasized time and again by Ronald McKinnon (the specific points which I suggest are, however, somewhat different to the well-known arguments of McKinnon). Moreover, new approaches to optimum growth and for the link between trade, FDI and output are developed. Finally, the role of a hybrid macroeconomic model for the understanding of banking crisis is emphasized—and new insights into modified neoclassical growth models of closed and open economies are considered (with due emphasis on innovation dynamics and R&D employment as well as aspects of the CES-function).

Those who consider market economy and democracy as two crucial elements for a decent life cannot avoid to frankly discuss the strange developments of financial globalization and to push for consistent reforms. The responsibility for the analysis is all mine.

December 2010 Prof. Dr. Paul J.J. Welfens
Wuppertal and Paris

Preface to the Second Edition

Within one year, this book has already been published in a second edition, testifying to the broad interest in the important subjects covered. I have made some clarifications and also some corrections, while also adding a new chapter on Innovations and the Economics of Exhaustible Resources, an important field with respect to the link between modern Schumpeterian innovation analysis and macroeconomics. In Chap. G, there are additional reflections on the ambiguity of the traditional approach of optimum growth theory as well with key insights drawing on my Kondratieff Prize Lecture in Moscow in 2007. I have also added some new ideas on the Macroeconomics of Microeconomics which basically argues that there should be a double consistency in Economics.

The basic perspective of this book is to emphasize the need to consider the innovation phenomenon in a broader perspective; it is not only relevant for certain cyclical dynamics but also—in a more traditional vein—for long term growth analysis as well as sustainable economic development.

I have particularly benefited from my visiting Alfred Grosser professorship 2007/2008 at Sciences Po, Paris, and the interesting discussions with Antoine Leblois, Paris, and the suggestions of Gerhard Huhn, Mevlud Islami and Jens Perret, EIIW Wuppertal. Finally, I am grateful to discussions with my colleagues in the Jean Monnet Project Financial Market Integration, Structural Change, Foreign Direct Investment and Economic Growth in EU25. I am particularly grateful to Julius Horvath at the Central European University, Budapest.

My greatest gratitude goes to my wonderful family who has supported my research with so much patience over so many years.

December 2008 Prof. Dr. Paul J.J. Welfens
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Preface to the First Edition

This book deals with the role of innovations in macroeconomics, and it presents innovations in macroeconomic theory. Growth and structural change are key issues here, but we also touch upon links between exchange rate dynamics and innovations. The approaches and ideas presented are not integrated into a large comprehensive model. Rather, we present analytical building blocks in selected fields of Schumpeterian Macroeconomics, including new insights about trade, growth, exchange rate dynamics, innovations and policy options.

An important starting point in Chap. A is a generalization of the Solow growth model and a long term analysis of the link between process innovations and the price level as well as the exchange rate, which is shown to critically depend on the income elasticity of the demand for money. Moreover, we discuss the long term Phillips curve in the context of a growth model and can thereby gain some new insights. The theoretical reflections presented suggest the need for new empirical work. We also consider the role of foreign direct investment flows. Chapter B is an attempt to bridge the medium term analysis with the long run growth analysis. It is argued that individuals will partly base consumption—and thus savings—on current income and expected steady state income. While this approach is closely related to the permanent income hypothesis, its specific implications are quite interesting. Chapter C takes a closer look at some integration issues. Chapter D puts the focus on both growth in open economies and the real exchange rate. The analysis in Chap. E is again devoted to open economy topics, where we present a Mundell-Fleming-Schumpeter model with product innovations. Chap. F focuses on the link between stock market dynamics and the exchange rate, and the framework presented is new and works rather satisfactorily from an empirical perspective. Chapter G starts with the traditional optimum growth framework and then proceeds by looking at the topic of endogenous growth (or quasi-endogenous growth). Chapter H involves trade, structural change and growth in open economies, while Chap. I looks at the role of innovations in a digital market economy. Chapter J puts the focus on EU innovation policy and raises some critical questions about the EU economic policy. Finally, Chap. K considers some aspects of monetary integration and growth including basic policy implications. In a rather simple approach, we explain why the integration of global financial markets has brought about a global fall of the interest rate along with