
Preface

This book is about the study of topics in macro dynamics from an applied, empirical perspective. The modeling philosophy behind most of the chapters of this book is of Keynesian nature, representing an attempt to revive this theoretical perspective on the working of the macroeconomy. The macroeconomic research pursued here is somewhat different from the mainstream literature using the Dynamic Stochastic General Equilibrium (DSGE) approach as the basic modeling device. The main features of the latter are the assumptions of intertemporally optimizing agents, rational expectations, competitive markets and price mediated market clearing through sufficiently flexible prices and wages. The New Keynesian approach to macroeconomics has, in the last decade or so, to a large extent, also adopted the DSGE framework, building on intertemporally optimizing agents and market clearing, but favoring more the concept of monopolistic competition, sticky wages and prices and nominal as well as real rigidities. A path breaking work of this type is the recent book by Woodford (2003).

However, it is well known that the intertemporal approach of smoothly optimizing agents and fast adjustments in order to establish temporal or intertemporal marginal conditions in the product market, labor and capital markets, has not been very successful to match certain stylized facts on those markets. A further deficiency of those intertemporal decision models is that macroeconomic feedback effects—and their stabilizing or destabilizing impact on the macroeconomy—have rarely been considered in those models. Yet, those feedback mechanisms, relevant for the interaction of all three markets, have been theoretically and empirically explored since the 1930s. The emphasis of the topics in our book lies on the study of the relative strength and interaction of these feedback mechanism as well as transmission channels with

respect to all three markets from a Keynesian perspective. We are, in particular interested in their impact on the stability once their working is considered in the context of a fully developed dynamic system approach.

While we do not deny that forward-looking behavior and (the attempt of) intertemporal optimization by the economic agents might be relevant for the dynamics of the economy, in our view the exclusive focusing on this issues in the present academic literature leaves too many interesting, important and relevant issues aside. In particular, in the interaction of all three markets there may be nonlinear feedback mechanism at work which do not necessarily give rise to market clearing, nor necessarily to convergence of a (unique) steady state growth path. Also, as recent research has shown, there is heterogeneity of agents and beliefs present in modern economies, as well as a large variety of informational and structural frictions present in the real world. We believe that this leaves many questions open so that the true understanding of the economy might better be pursued by a variety of frameworks. Often it is said with respect to the DSGE models: One needs to use an intertemporal optimizing and rational expectations' framework, otherwise one would leave "too much money on the side walk". But one might also add, by doing so, there is a danger that one might also leave too many problems in macroeconomics on the side walk.

One central point in our book on topics of macro economics are the mechanisms generating non-cleared markets and the phenomenon of disequilibrium recurrently present in certain markets such as the labor markets. In contrast to the tradition which stresses the clearing of all markets at each instance of time, in our modeling approach, as it will be stressed at several occasions throughout this book, these disequilibrium situations are the main driving forces of the wage and price inflation dynamics. These, in turn, might act either in a stabilizing or destabilizing manner through a variety of different macroeconomic channels such as the real wage feedback channel, product market or financial market channels. As the reader will notice, the many estimations discussed throughout this book confirm the empirical plausibility of our modeling approach, showing that there are indeed different (and also valid) possibilities to specify and analyze the dynamics of the macro economy in a different way than in the DSGE framework.

Due to the fact that in our modeling approach the stability of the analyzed dynamical system is not imposed *ad initio* by the rational expectations assumption, which requires that the economy always "jumps" to the stable path and therefore always converges to the steady state after any type of shocks, its stability properties (and its analysis) are based on the relative

strength of the interacting macroeconomic feedback channels. Such type of stability analysis, despite of its importance for the understanding of the dynamics of an economy, seems not to be relevant for the literature based on the rational expectations market clearing tradition. The existence of possibly divergent paths does not appear to be a relevant issue either. However, the ongoing occurrence of “bubbles” and “herding” in the financial markets across the world, as well as the large macroeconomic imbalances present nowadays in the global economy show that such divergent paths can indeed take place.

Our book commences with a chapter, Chap. 1, where we concentrate on the issues surrounding the problem of continuous time versus period modeling choices. In particular we study the relevance of the assumed uniform time unit for the dynamics of a model formulated in discrete time with respect to an analogous model formulated in continuous time. This preliminary analysis has two main purposes: first, to motivate the continuous time (and also the disequilibrium) modeling approach pursued throughout this book, and second, to highlight the importance of continuous and discrete time model equivalence for applied macrodynamic analysis (without or with the addition of significant and relevant time delays). Indeed, even though economic decisions might be revised in a quarterly or annual frequency at the individual level, given the large number of agents and the highly probable de-synchronization between them, a continuous- or quasi-continuous time theoretical formulation of the resulting dynamics seems more adequate at the macroeconomic level.

Part I of the book focuses on advanced topics of the dynamics of closed economies. Here the baseline AS-AD framework of advanced type is outlined and, in a variety of alternative formulations and extensions, investigated and estimated. Empirical evidence not only on the wage-price dynamics of this framework but also for the remaining equations of the model, concerning Keynesian quantity adjustment processes and a monetary policy rule, is provided. The role of wage- and price-flexibility, of income distribution as well as of monetary policy for stabilizing the dynamical economic system is analyzed in detail. Furthermore, in Chap. 5, a closer look is taken at the link between the goods and the labor markets by means of a thorough analysis of Okun’s Law. As recent work has shown there might be some significant de-linking of the product and labor market dynamics. Altogether, this part provides a detailed introduction into a Keynesian AD-AS framework that, in view of the state of traditional Keynesian modeling, may be called “matured” instead of “new”. It represents more of an advancement of the traditional approach in contrast to the complete overhaul of its theoretical foundations as it is characteristic for the “New Keynesian” DSGE approach.

Part II analyzes advanced topics on the dynamics and interaction of open economies. It starts from the description of an IS-LM-PC model of Dornbusch myopic foresight type in which the stock market dynamics showing the same type of foresight are incorporated, and where both sluggish price and quantity adjustment occurs in an otherwise perfect world. The questions there is to what extent does the open economy dynamics impact the domestic asset and goods market and what type of Taylor policy rule is appropriate in such a context. After this discussion of a model of rather classical type, in the following chapters somewhat alternative models are investigated. In Chap. 7 a Mundell–Fleming–Tobin model is set up in order to investigate the interaction of fiscal and current account imbalances and the dynamics of inflation. In Chap. 8, in a similar framework, an attempt is made to model and understand the dynamics of currency and financial crises—in recent times seen to unfold in many countries, in particular in emerging markets. The macroeconomic interaction of two large economies through a variety of international transmission channels is investigated in Chap. 9 by means of a semi-structural two country model and estimated for the case of the US economy and the Eurozone. In an outlook, in Chap. 10, we highlight the importance of having supply constraints in the dynamics of demand-driven macroeconomy, but show at the same time that they rarely become binding ones if active inventory policies of firms are added to the demand driven core dynamics.

This book builds to some degree on research papers written jointly also with further co-authors pursuing this line of research. We here have to thank here in particular Toichiro Asada from Chuo University, Pu Chen from Bielefeld University, Carl Chiarella from the UTS Sydney, Reiner Franke from Kiel University, Gang Gong from Tsinghua University, Florian Hartmann from Bielefeld University and Hans-Martin Krolzig from the University of Kent for their contributions and the stimulating discussions we have had with them on many occasions in the recent and more distant past. Of course, the usual disclaimer here applies.

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Peter Flaschel
Gangolf Groh
Christian Proaño
Willi Semmler



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Flaschel, P.; Groh, G.; Proano, C.; Semmler, W.

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