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## BOOK REVIEWS

Jacek Wallusch, 2013, Patrząc na Słońce. Nieokreśloność równowagi a polska dezinflacja 1994–2011 [Looking at the Sun. Equilibrium Indeterminacy and the Polish Disinflation 1994–2011], Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu, Poznań, pp. 128, ISBN 978-83-7417-760-3

This book is – as far as I know – the first Polish publication on the important theoretical concept of indeterminacy of equilibrium and its application in monetary policy studies. Jacek Wallusch does much more in this book than simply presenting and reviewing major strands of theoretical literature on sunspot equilibria in monetary theory. He applies these ideas to the comprehensive empirical study of the Polish monetary policy in the period of disinflation and plausibly shows how this policy should be designed and implemented to avoid sunspot equilibria.

The book begins with an introduction that addresses some major issues and introduces a framework for the empirical work conducted by the author. Let me focus on a single methodological question from amongst the issues addressed by Wallusch in the introduction: how (and whether) should we use the mainstream theories and models, developed for advanced economies, when studying transition economies like Poland? The answer Wallusch suggests is to use mainstream economics but to adapt it – as he writes early in the book it is not the mainstream economics that is the major cause of the crisis but rather it is its undiscriminating application to all and any question that may arise.

Therefore what he does in his own research presented later in the book is exactly that which he suggests in the book's introductory chapter. He begins his own study in chapter two where he concentrates on the disinflation process described with various kinds of the Phillips curve. The mainstream approach would be to use the New-Keynesian Phillips Curve, possibly in its hybrid version (the latter includes both forward-looking and backward-looking elements). Wallusch presents this strand of the literature. However, his own approach is driven to a substantial extent by some empirical features of the Polish inflation, e.g. its (lack of) stationarity and its strong persistence. Wallusch is of the opinion that these features justify modelling the Polish inflation with a classic Phillips curve.

This notwithstanding Wallusch shows later on in this chapter that it is impossible to empirically prove what is the "true" model of Polish inflation, as the classic Phillip's curve and its New-Keynesian version are, in the Polish case, observationally equivalent<sup>1</sup>.

Nevertheless it is the classic version of the Phillips curve that is used further throughout the text. The next chapter of the book applies a small new-Keynesian macroeconomic model (though with a classic Phillips curve) to define the equilibrium determinacy conditions that are fully determined by the monetary authority. In a nutshell the results obtained here are a generalized version of the traditional outcome: monetary policy has to aggressively react to inflation and in some cases also to output changes. The next chapter extends the theoretical analysis of model features by deriving reactions of output and inflation to fundamental and sunspot shocks under different monetary policy rules. Here again the results – though obtained with a modified version of the mainstream model – are qualitatively the same as those from the mainstream literature. Indeterminacy of equilibrium is accompanied by the strong increase in the volatility of both inflation and output.

The focus of the final chapter of the book is Polish monetary policy. Wallusch attempts here to identify what rules have been used by the Polish central bank – varying not only the type of rule, but also their degree of looking forward-, the inflation indicator implemented as a model variable, and the sample. That serves as a basis for assessing whether Polish monetary policy has fulfilled all conditions needed for maintaining the determinacy of equilibrium or not.

As is often the case in empirical research the answer to this final question is not simply "yes" or "no". To quote the author himself " periods, when the reaction of the NBP [the Polish central bank] guaranteed the determinacy of the equilibrium, alternate with periods of possible sunspot equilibria. 2000–2002 and 2010– 2011 are the periods of continuously aggressive reaction [of the monetary policy]" (pp. 114/115).

As the author stresses himself in a few places in his book the methodology applied is its very important feature. Wallusch takes the orthodox model approach to monetary policy, shows how this model may be adapted for an emerging market economy

<sup>&</sup>lt;sup>1</sup> Sargent introduced this concept in his 1975 working paper "The observational equivalence of natural and unnatural rate theories of macroeconomics", published a year later as an article in the Journal of Political Economy. A clear exposition of this concept applied in a more general context can be found in chapter 15 of "Advanced Macroeconomics: A Primer" by Patrick Minford and David Peel.