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doi:10.1111/j.0013-0133.2004.191_3.x A Theory of Economic Growth: Dynamics and Policy in Overlapping Generations. Christian Ghiglino

By De La Croix (David) and Michel (Philippe). (Cambridge and New York: Cambridge University Press, 2002. Pp. xvii+378. £55.00 hardback, US $75.00 hardback, £20.95 paperback, US $28.00 paperback. ISBN 0 521 80642 9, 0 521 00115 3.)

The overlapping generations model of Samuelson, Diamond and Allais has been for three decades an important instrument of policy analysis. However, the role played by the demographic structure in why and how economies grow was not recognised: 'The mechanics of growth', as Lucas would say, seemed to owe little to demography. But times are changing. The overlapping generations model has started a second youth and is now a 'growth model'. The book by David de la Croix and Philippe Michel comes at the right time as it provides the necessary foundations for this renewal. Indeed, the book gives an exhaustive analysis of the overlapping generations model with simple production. It also provides an up-to-date and complete analysis of the issues for which the model happened to be useful. Aimed at graduate and PhD students, it nicely complements its predecessors, in particular, Azariadis' Intertemporal Macroeconomics and Wallace and McCandless' Introduction to Dynamic Macroeconomics.

De la Croix and Michel have chosen the strategy of being exhaustive on one model, the Diamond model, instead of covering a variety of models. I will develop three points. In 1965, Diamond introduced production in the pure exchange overlapping generation model of Samuelson. Most of the literature on overlapping-generation with production has followed his formalisation. De la Croix and Michel also unconditionally adopt this model and its philosophy. Diamond made a strong assumption though: accumulation of capital is the only way agents can save. This is far from innocuous and rules out one of the most important features of general overlapping generation economies, the indeterminacy of equilibria. Clearly, eliminating indeterminacy makes the model 'presentable' and easy to use in addressing policy issues. However, as other assets than capital can be found out there in the real uncertain world, one should probably be careful not to simply ignore this issue.

Focusing exclusively on the offspring of the Diamond model also eliminates some of the 'best of' of the overlapping generation literature. In particular, the 'esoteric' aspects of the model are minimised. For example, indeterminacy is a major source of Sunspots when the economy is imbedded in an uncertain environment. Another example is provided by the heated debate on why the first welfare theorem fails in this model. Important references as Shell's 'Notes on the economics of infinity' and Brown and Geanakoplos''Understanding overlapping generation economies as lack of market clearing at infinity' concern pure exchange economies.

The reader could also be surprised by the absence of some obvious generalisations, in particular to two sector production economies. Models with long-lived consumers are mainly absent from the book. Finally, altruism and human capital are indeed treated, but to a much less extent than the basic Diamond model.

However, the authors had to make a choice. They excel in the treatment of all generalisations that keep the basic Diamond's structure. And as such the book contributes significantly to the literature. The structure of the book also reflects this choice. Chapter 1 contains the set-up of the model and the main definitions. Chapter 2 is devoted to the traditional issue of optimality. Chapter 3 is devoted to all policy considerations while Chapter 4 is dedicated to Debt. The inclusion of altruism and of human capital is confined to Chapter 5, Further issues. The book carefully follows the tradition established by its predecessors. It shows absolute rigour in defining the concepts and in proving the results. It provides extensive analysis of the impact of the various policies, as changes in the tax scheme, debt etc. Finally, some space is devoted to (another) survey on mathematical tools. The plan underscores the fact that little attention is devoted to the link between the data and the models. This could be seen as a weakness particularly in view of the role that empirical analysis occupies in the endogenous growth literature.

To conclude, this is an excellent book in the tradition of the best books available on overlapping generation models. Even though it probably doesn't provide 'A Theory of Economic Growth' it is yet the final word on the Diamond model and its extensions. As such it is an indispensable tool allowing graduate and PhD students not to reinvent the wheel.

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