A Review of:

Knowledge, Information, and
Expectations in Modern Macroeconomics:
In Honor of Edmund S. Phelps

Edited by Philippe Aghion, Roman Frydman,
Joseph Stiglitz, and Michael Woodford

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This festschrift volume for Edmund Phelps is a remarkable book. It contains many papers by very distinguished macroeconomists, all in areas to which Phelps made big contributions. Many of the individual papers are excellent but their cumulative effect is extraordinary, giving a sense of the huge impact of Phelps' work. He evidently is an impressively deep thinker with wide-ranging interests and a very broad mind. Phelps can take full or substantial credit for the natural rate of unemployment, the expectations-augmented Phillips curve, the island parable, efficiency wages, the golden rule of growth and much more (page 3).

The book is divided into four parts: Information, Wage-Price Dynamics, and Business Fluctuations; Imperfect Knowledge, Expectations, and Rationality; Determinants of Equilibrium Unemployment; and Education, Technical Change, and Growth. Of course, this is credible topics list for a first-year graduate course in macroeconomics; however despite this coverage the book does not resemble a textbook. The papers almost always derive clearly from Phelps but the authors take the ideas in their own idiosyncratic, often esoteric, directions. Nevertheless, some chapters do give a strong sense of the main ideas at stake, including the editors' introduction, chapter 7 (Lucas), chapter 12 (Pollak), chapter 13 (Phelps), chapter 17 (Blanchard), chapter 22 (Hall), chapter 27(Solow) and chapter 28 (Phelps).

The book is large and the space for this review is small so I now discuss only a few papers that struck me as particularly interesting. The conception of human capital as not just as an ordinary input into a production function but also as a vital ingredient for the creation and absorption of new technologies is an important idea of Phelps' that has attracted serious attention only recently. Acemoglu (chapter 23) explores its potential by developing a theory of skill-biased technological change. He shows that a "market size effect" can drive technological progress to use skills more intensively the more widespread they are in an economy. This is because the payoff to creating skill-intensive technologies is increasing in an economy's stock of skills. In other words, lots of skills mean lots of applications for skill-using technologies and lots of profits for their inventors. This mechanism disadvantages a technological follower country with a relatively low ratio of skilled to unskilled labour because the leader country develops technologies that are too skill-intensive to be appropriately applied by the follower country. This work provides a nice micro foundation for Phelps' idea, translating a human capital disparity into a technology adoption problem.

Aghion, Howitt and Violante (chapter 21) take the same Phelps insight in a different direction, considering an economy's reaction to the appearance of a "general purpose technology", i.e., one that can be applied across many sectors. Only skilled workers can operate the technology and only they can convert "templates" for it into production practice. Templates appear at a rate that increases in the extent to which the technology has diffused. The rate of skill accumulation can diverge significantly from growth rates of skills demand in a manner that generates a plausible explanation for the evolution of both the US skill premium and inequality within skill groups since the 1970s.

Heckman (chapter 18) is a remarkably critical piece on the German labour market. He argues that excessive regulation and bad incentives, ostensibly aimed at ensuring social justice but in practice just cushioning a few favoured workers, are turning Germany into a "second-rate" economy. Only radical reform can save it.

Nickell, Nunziata, Ochel and Quintini (NNOQ, chapter 19) and Ljunqvist and Sargent (LS, chapter 16) address the divergence in unemployment experience between Europe and the non-European OECD that began in the 1980s. LS observe that European unemployment compensation has been more generous than in the rest of the OECD throughout the post-war period while unemployment performance separated only in recently decades. They invoke an increase in the size of macroeconomic shocks in the later period compared to the earlier one, arguing that the weakness of European institutions lies specifically in how poorly they react to big shocks. This shortcoming was only exposed with the appearance of great turbulence on the world economic scene beginning in the 1970s. In contrast, NNOQ assemble and analyse both macroeconomic and labour institution data, concluding that changing institutions do actually predict well the diverging unemployment patterns that emerged in the OECD in the 1980s. However, Fitoussi (chapter 20) disputes this conclusion.

In summary, few people will wish to read the whole book, given its wide range and specialist approach. Nevertheless, most macroeconomists will want to have it on their shelves for periodic consultation. Some of the papers will surely become classics.