

But the missing ingredient is fundamental. Without identifying it, differences in analysis between Austrians and non-Austrians often cannot be understood. Furthermore, those differences will manifest themselves in policy conclusions as well.

For example, it is quite common for mainstream economists, particularly of the "Chicago School," to reject the model of perfect competition as a guide to public policy in the area of antitrust enforcement, citing the "competition as a process" views of Hayek and Kirzner. Yet, while Austrians typically argue, à la Armentano, that *all* antitrust laws should be abolished, including those against collusion and price fixing, even the most free market Chicago economist rarely comes to that conclusion. Similarly unexplainable differences between Austrians and, most usually but not always, Chicago-school economists, can be seen in areas such as tort law and social-cost analysis, public-goods theory, and tax analysis. These differences are often chalked up to ideological rather than methodological differences. But that assessment is incorrect.

Esteban Thomsen has accurately identified the missing ingredient in his book *Prices and Knowledge*. Further, he has made it his central organizing principle in comparing the Austrian school's approach to the economics of information, especially Hayek's, with others who incorporate certain aspects of Hayek's approach in their analysis. The missing ingredient relates to the state of the world in which the economic analysis takes place. For Austrian theory, market activities are part of an overall process of trial and error. Expectations are often incorrect and always subject to adjustment and fine-tuning. This is a world where prices are *never* in equilibrium.

In more mainstream discussions of prices-as-spreaders-of-information, that is not the case. Indeed, Thomsen argues that the absence of a disequilibrium world view leads to both a misunderstanding of Hayek's basic arguments and to an incomplete analysis of the role of prices. Thomsen correctly points out that Hayek's most basic proposition, the idea that prices contain and disseminate relatively accurate information is now widely accepted among economists. But he also argues that "because most work in the economics of information has been done within an equilibrium framework, Hayek's arguments have not always been fully understood and some of their implications have been missed" (p. 29). As an aside, Thomsen notes that failure to appreciate this key ingredient of Austrian economics, and Hayek's "price theory," ultimately prevented most historians of economic thought from fully understanding Mises's and Hayek's arguments regarding the failures of socialism.

The overriding purpose of Thomsen's book is to correct some misunderstandings and draw out the missed implications that result from ignoring the role of disequilibrium prices. He does this by assessing the work of the most prominent theorists in the economics of information, among them Grossman, Stiglitz, Simon, and Nelson. From what Thomsen identifies as a "market process" perspective, the important questions pertain to the role that relative prices play and the kinds of activities they generate

when the information they contain is incomplete or even erroneous. Thomsen explains that the price system is not simply a dispenser of already "known" information but is also a catalyst for the discovery and promulgation of completely new knowledge. As Kirzner has pointed out, it is the existence of disequilibrium prices that ultimately gives rise to entrepreneurship, which by definition is the discovery of information that has not yet been uncovered.

A further point Thomsen makes is that even errors contained in price movements or relative prices ultimately have positive informational value. When erroneous prices are acted upon by market participants they generate losses that send signals to other market participants about what *not* to do, and generate corrective actions on the part of those who bear the losses. As Thomsen argues, "Disequilibrium prices provide . . . a feedback mechanism for their own correction that makes them a more sophisticated informational device than they may seem when concentrating only on their equilibrium role" (p. 3).

The implications for economic analysis of this approach to the dissemination and discovery of information are more far-reaching than even Thomsen seems to recognize. In the real world, the market process is completely open-ended because there is no finite amount of information to be discovered. The passage of time implies continuous changes in information. From the vantage of a particular point in time, the entrepreneurial process involves not only the discovery of information waiting to be noticed but also guesses about information that has yet to come into existence: the preferences of people who are not yet born or simply the changed preferences of people from one year to the next. Thomsen makes it clear that the disequilibrium world view leads to a total rejection of standard welfare economics and the idea that real-world policy conclusions can be based on a comparison of actual market conditions with those found under general equilibrium. In other words, consistent acceptance of the market-process view would imply a total reconstruction of standard normative economics. But if knowledge is infinite, which seems to be the implication of market-process analysis, and inherently imperfect, do we have the ability to identify general equilibrium solutions at all, even conceptually? This is a logical and important question to ask in light of Thomsen's analysis. Clearly a negative answer would imply a fundamental and even revolutionary change in economics as a science.

Esteban Thomsen has made an important contribution to the economics of information and the role of prices in a real-world, market-process setting. As noted, his analysis has far-reaching implications and should serve as the basis for much more research. The book is very well written and clearly organized. It should also be pointed out that Chapter 2, "A Theory of the Market Process," is one of the best overviews of the modern Austrian approach to market analysis in the literature. It could easily be used in the classroom as a stand-alone introduction to Austrian economics.

Roy E. Cordato
Campbell University