

〈Book Review〉

Robert W. Dimand and John Geanakoplos eds.,
*Celebrating Irving Fisher, the Legacy of a Great
Economist*, Blackwell 2005, xvi+456pp.

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Already four commemorative volumes of Irving Fisher (1867-1947), who is one of the founders of modern economic theory in the United States of America, have been published. He was the first American academic economist who was trained in professional mathematics and put statistical methods and data to practical use.

The first commemorative book, *The Lessons of Monetary Experience* edited by Arthur Gayer, was published on the occasion of Irving Fisher's seventieth birthday in 1937. Contributors to this volume are Marriner Eccles, Alvin H. Hansen, Ralph G. Hawtrey, John M. Keynes, Erik Lindahl, Bertil Ohlin and others. This book is, therefore, a classic of great significance about the study of contemporary international economic, monetary and financial situations. As the editor admits, however, the "only reference to him [Fisher-the reviewer]" is "in dedication of this book" (p.vi), and hence no attempts are made to clarify the originality and role of Irving Fisher's economics.

The second book dedicated to Fisher is *Ten Economic Studies in the Tradition of Irving Fisher* (Feller *et al.*, John Wiley & Sons, 1967) in which W. Fellner, T.C. Koopmans, P.A. Samuelson, J. Tobin and six other economic theorists write. In this volume, they consider theoretically and empirically the tools of analysis that Fisher invented. Here again, the purpose of exposing Fisher's economics systematically was of secondary importance.

The third book, *The Making of Tests for Index Numbers* (Vogt & Barta eds. Physica-Verlag, 1997), focuses on the problem of "measurement in economics" which Fisher pondered all his academic life. Though this book lies a strong point in overviewing the history of the index theory from the eighteenth century to the present, it is undeniable that the meanings of the index theory in Fisher's economics are left unclear.

The fourth book, *The Economics of Irving Fisher, Reviewing the Scientific Work of a Great Economist* (Loef, Hans-E. & Monissen, H.G. eds. Edward Elger, 1999), should be highly esteemed,

as it contains many citations of Fisher's own words and covers the subjects in which Fisher engaged during his lifetime. They are microeconomics that starts with the static general equilibrium theory and the theory of interest which involves intertemporal choices and investment opportunity, macroeconomics that analyzes the relationship of the price level and money and culminates the debt-deflation theory, econometrics, the theory of capital and the theory of taxation.

It is, however, unfortunate that each contributor does not agree on the general interpretation of Fisher's system of thought, and that the outline of Fisher's economics still remains unclear. This is due to lack of analysis of the development process and the theoretical relations of the various fields in that Fisher was engaged. In fact, although this book is generally composed retrospectively from the period of the Great Depression until his formative years, it is undeniable that, as the editors have admitted, its contents are "rather arbitrary or *ad hoc*" (p.xv). Fisher's theoretical system cannot be clarified without exposition of the relationship and the logical development of each of the parts which constitute the book.

A new commemorative volume has been added to these four books and is reviewed here. *Celebrating Irving Fisher* contains fourteen articles and commentary papers about them. Most of articles are reprints published previously in *The American Journal of Economics and Sociology*, vol. 64, no.1, Jan. 2005.

The book opens with the foreword by George W. Fisher, a grandson of Irving Fisher and a professor of Geology at Johns Hopkins University. It is followed by the editors' "Celebrating Irving Fisher; the Legacy of a Great Economist"; a revised version of Robert Dimand's "Irving Fisher and Modern Macroeconomics" (*The American Economic Review*, vol.82, no.2, May, 1997). This first article provides an overview of Irving Fisher's life and a brief outline of this book.

The second article is titled "Irving Fisher (1867-1947)" by James Tobin (it may now be called a classic study of Fisher), that was originally published in *The New Palgrave; a Dictionary of Economics*, 3 vols. 1987.

William Barber's "Irving Fisher of Yale" follows. Barber, the editor of *Works of Irving Fisher* (14 vols. Pickering & Chatto, 1997) depicts Fisher's entire academic life at Yale University, in which Fisher sometimes had trouble. (As mentioned above, the first commemorative book, published in 1937, his insist that Fellner *et al* (1967) was the first (p.43) is incorrect. In addition, by stressing William G. Sumner is contribution to Fisher's Ph.D. thesis, it seems that he underestimates the role of Willard J. Gibbs.)

The fourth essay, "How to Compute Equilibrium Prices in 1891" by W. C. Brainard and H. E. Scarf, examines Fisher's exposition of general equilibrium by "the hydraulic model" through MATLAB. Moreover, the authors study the adjustment process of the economic variables in

question that Fisher did not consider in detail.

In a commentary paper to Brainard and Scarf's, D. Brown and F. Kubler analyze the system of non-linear equilibrium equations in a different way : "the homotopy method." However they only address "the two-consumer-and-three-good-model." Further expansion is expected, but not provided.

According to another comment by Screenivasan, an engineer, "Fisher himself seems not to have worried about dynamics ... (p.92)." His interpretation is open to question. For Fisher articulated the limitations of static analysis and the necessity of dynamic analysis in the appendix of his *Mathematical Investigations in the Theory of Value and Prices* (1892).

In the fifth article, "Controlling the Price Level," R. E. Hall addresses the theoretical and practical topic of the monetary experiment, such as Uniad de Fomento (U.F.) in Chili in the mid-twentieth century and compares it with Fisher's "compensated dollar plan." He suggests a number of alternatives to monetary policy as an implication of his argument. Tobin, who comments on Hall's article, insists that one cannot compare the U.F. with Fisher's compensated dollar plan directly, because the latter precludes the gold standard system as *sine qua non*.

P. C. B. Phillips' sixth paper estimates the real rate of interest *via* the semi-parametric model. And it shows that what is called "the Fisher effect" works in the long run with residual-based-co-integration tests. Phillips expands "the Fisher equation" that relates the nominal and real rates of interest and the expected inflation rate.

The seventh article, "Fisher, Keynes and the Corridor of Stability" by R. Dimand, confirms the place of Fisher's debt-deflation theory in the history of macroeconomics in the light of "the corridor of stability" concept proposed by A. Leijonhufvud (1981). Dimand, who is interested in modern macroeconomics' formative years, interprets the debt-deflation theory as a model that an economy is self-adjusting as long as monetary and/or real shocks are not too large, while large shocks leads an economy to lose its threshold to recess, as happened in the Great Depression.

The eighth paper, originally published in *The American Economic Review* in 1997, "Fisher's Introductory Text" by James Tobin, focuses on Fisher's forgotten textbook, *The Elementary Principles of Economics* (1912). Tobin discovers the book's merit lies in its mention of the concept of human capital, though there is no analysis on the business cycles theory.

The next essay, "Fisher's *The Nature of Capital and Income*," was first published as a contributing article (in Germany) in *Vademecum zu einem Klassiker der Amerikanischen Nationalökonomie* (Verlag Wirtschaft und Finanzen GmbH, 1991), and then appeared as an English re-translation in *The Works of Irving Fisher*. It is based on Schumpeter's suggestion (1951) that *The Nature of Capital and Income* "... besides presenting the first modern theory of accounting, is

(or should be) the basis of modern income analysis.” Tobin praises the books for defining fundamental concepts, such as wealth, capital, income and stock and flow, and for treating them as statistically operational. It is, however, regrettable that Tobin does not make the point that Fisher departs from timeless static analysis in *The Nature of Capital and Income* which in turn marks a watershed for his subsequent writings.

The tenth article, “Irving Fisher’s Spending (Consumption) Tax in Retrospect” by John B. Shoven and John Whalley, attempts to discover the feasibility of Fisher’s spending tax proposal, which differs from the existing consumption tax in Japan. (To avoid confusion, Nicholas Kaldor (1955) called the former “an expenditure tax.”) Fisher’s tax reform plan is, as the contributors point out, a direct logical consequence of his original capital concept, which is defined as all stock of wealth possessed by human beings and excludes savings, as a postponement of enjoyment of income. This enjoyment of income, on the other hand, is a flow of service rendered by capital.

J. Geanakoplos’ eleventh article, “The Ideal Inflation-Indexed Bond and Irving Fisher’s Impatience Theory of Interest with Overlapping Generations,” argues that the ideal inflation-indexed bond should be designed to keep utility level constant rather than not to keeping a monetary unit to purchase a fixed bundle of commodities. He also solves the contradiction between the result of the overlapping generations model (the rate of interest in the OLG model equals the growth rate of the population) and Fisher’s insistence that the rate of interest is equal to the rate of time preference by introducing land into the OLG model and assuming a steady state economy.

The twelfth paper, “Index Number Using Differences Rather than Ratio,” is contributed by W. Edwin Diewert. Diewert suggests abandoning our common idea to use ratios as index numbers and proposes to adopt a differential to index numbers. Also, a discussant, M. D. Shapiro, examines the contributions of Irving Fisher to the modern index numbers theory.

The thirteenth and fourteenth articles, “Irving Fisher and the Contribution of Improved Longevity to Living Standards” by William D. Nordhaus and “Health, Government, and Irving Fisher” by Victor R. Fuchs, illuminate the Fisher’s lifelong crusade for keeping national health care. However, none of the contributors and discussants regard *The Nature of Capital and Income* as the foundation of his social crusade. The reviewer, of course, does not deny the influences of Fisher’s father’s death from tuberculosis, and Fisher’s own miracle recovery from it, and of the death of his elder brother and sister.

In general, the reviewer cannot help having doubts about reading this book. First, though Fisher’s interest theory is applied to determine the *nominal* rate of interest, more than a few writers consider it to determine the *real* rate of interest (p.29 & *passim.*). Second, a common interpretation, that when writing his Ph.D. thesis, Fisher did not know Walras (p.8 & *passim.*) is

clearly an error. Finally, the Fisher equation, which is not the determining device of real rate of interest nor nominal, is used as a determinant of real rate of interest (p.125 & *passim*).

These mistakes will disappear when one reads his *Works*, especially, *The Theory of Interest*, (p.43 and p.45), and his son's biography *My Father Irving Fisher* (p.45), which will be useful.

Regardless these basic mistakes, the editors, contributors, and discussants fully appreciate Fisher's greatness as an economist and a social reformer. The reviewer hopes that Fisher's "legacy" will be studied more closely hereafter.

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