

# The Third Essay on Methodological Background in Finance

## — Further Epistemological Observations —

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As noted in the previous two essays, the underlying economic methodology has not yet been resolved firmly. Further comments on epistemological issues are given below. The purpose is not to construct a coherent methodology but to present and to arrange different ways of economic thinking, eg., the neo-classical paradigm, fundamentalist Keynesians and Veblenism.

### 3.1 Neoclassical Paradigm Revisited

This section reexamines the neoclassical paradigm from a dynamic disequilibrium point of view and a critical review of the paradigm is given.<sup>1</sup> Discussions are succinct but general ; the criticism may be directly applied to the orthodox theory of finance, e. g., Fama and Miller (1972).

There are several characteristics of the neoclassical paradigm which are closely related to the stationarity of equilibrium.

#### 3.1.1 Profits and Utility Maximisation

Once, Joan Robinson observed : “The doctrine that firms “maximise profits” collapses as soon as it is taken out of the equilibrium world and set in historical world. For a firm which is growing from year to year by investing retained profits, the maximum flow of profits will be reached when it commands an indefinitely large value of capital”.<sup>2</sup> An alternative model of maximising discounted cashflow for an investment project is also insufficient for explaining the firm’s behaviour under the situation of uncertainty, since “the full information required to make a correct choice can never be available. . . . the firm does not know which would in fact be the most profitable alternative. . . . the alternative actually chosen was that which was expected to be the most profitable.”<sup>3</sup> This doctrine is nothing but a tautology which

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1 Vickers (1975) suggests the sublime importance of a Keynesian non-Walrasian disequilibrium analysis in the field of the financial behaviour of the corporation. Henin (1977) has pointed out the relevant analysis of the financial behaviour of corporations to a microeconomic foundation of macroeconomics.

2 Robinson (1977, p.1325).

3 Ibid. , pp. 1322, 1325 and 1326.

conveys no relevant information to a description of the decision-making of the corporation.

Kornai also points out this tautological nature in the theory of preference ordering and utility maximisation : “The theory reduces to the statement that in period t the decision-maker chooses what he prefers. . . regardless of the decision made by the decision-maker at a given time, one can always say that he chooses the alternative which maximised his own utility function.”<sup>4</sup> More fundamentally and radically, Hollis and Nell reject the neoclassical model of maximising profits or utility function, because it neglects the existence of social classes and fails to describe the economic system in a capitalist world,<sup>5</sup> In sum, the maximising model which has never been replaced in economics<sup>6</sup> may be said to be inadequate for the description, explanation, and comparison of the characteristics of the behaviour of individuals and firms in a capitalist economy.

### 3.1.2 Uncertainty

Neoclassical treatment of uncertainty can be concisely summarised as follows : “ . . . . . the classical and neoclassical “hard core” had always contained the idea of rational economic calculation, involving the existene of certainty equivalents for each uncertain outcome of current decisions.”<sup>7</sup> Keynes’ major contribution should be found in his emphasis on making a sharp distinction between calculable risk and uncertainty : “Human decisions affecting the future, whether personal or political or economic, cannot depend on strict mathematical expectation, since the basis for making such calculations does not exist.”<sup>8</sup> Certainty equivalent approach which is based on strict assumptions<sup>9</sup> is a sloppy habit of thought.

Kornai observes that the decision-maker facing an uncertain situation learns from his previous experiences and gathers information to lessen the uncertainty. Thus, “uncertainty and information mean the same thing, actully viewed from different sides, they differ only in signs.”<sup>10</sup> Under the situation of uncertainty, the assumption of costless information<sup>11</sup> is simply a logical contradiction.<sup>12</sup>

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4 Kornai(1971, p. 133).

5 Hollis and Nell(1975).

6 Gordon(1965).

7 Blaug(1975,p. 413).

8 Keynes(1936, pp.162–163).

9 Haley and Schall(1972, pp.184–185).

10 Alfred Renyi, cited by Kornai, op. cit., p.143n.

11 E.g., Fama and Miller, op. cit.

12 For further discussions, see Leijonhufvud(1968, pp.387–401).

### 3.1.3 Fisherian Theory of Intertemporal Choice

The concept of consumer sovereignty (which should be contrasted with the concept of producer sovereignty in the Cambridge School and Marxian framework) is a natural consequence of the Fisherian theory of saving behaviour of households. "What drives the economy in this conception are the intertemporal preferences of individuals engaged in exchanging today for consumption tomorrow."<sup>13</sup> The capitalist corporation is merely an instrument or a tool of shareholders.<sup>14</sup> Therefore, one can establish a well-known Fisherian separation principle in the theory of finance: "Under perfect capital markets, a policy of maximising the current market value of the shares held by present owners would lead to the same set of operating and investment decisions that each owner would have adopted if he had taken responsibility for the decisions himself."<sup>15</sup> The implication is that neoclassical theory expels active, creative entrepreneurs on the one hand, and abandons the systematic analysis of production, investment and financing decisions of the corporation in imperfect markets,<sup>16</sup> on the other.

### 3.1.4 Econometric Verification

A positivistic character of the neoclassical paradigm culminates in its heavy reliance on statistical or econometric verification. Two major objections immediately follow, particularly in relation to the statistical work in the field of the neoclassical theory of finance.

First, statistical analysis does not prove the maximisation or optimisation behaviour based on assumptions on perfect markets, rationality, etc. Secondly, relevant information such as decisions, preferences, states of information, and expectations<sup>17</sup> cannot be precisely measured in the published data. The statistical verification in the neoclassical framework can support the existence of "an automation in a fixed and immutable environment which can be replaced by a computer which has nothing to decide,"<sup>18</sup> but cannot provide a meaningful insight for the active, creative behaviour of the corporation in the real world.<sup>19</sup>

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13 Harris(1975, p.329). See also Marglin(1971).

14 Friedman(1962).

15 Fama and Miller, *op. cit.*, p.97. See also Haley and Schall, *op. cit.*

16 Vickers(1968) and Henin, *op. cit.*, p.256.

17 Morgenstern(1972).

18 *Ibid.*, p.1134. See also Shubik(1970).

19 For more general discussions of verification in economics, see Ward(1972).

### 3.2. Fundamentalist Keynesians

Methodological and epistemological stance of fundamentalist Keynesians<sup>20</sup> is attractive at least to those who criticise the neoclassical paradigm in the sense that it avoids the problems of uncertainty in the real world. Fundamentalist Keynesians take an explicit account of the uncertainty in various personal and economic decision making problems.

Following Shackle (1969) and (1972), Keynes' treatment of uncertainty has revived with Vickers (1973)<sup>21</sup>, this time being applied to financial theory of the capitalist corporation.

Vickers' position against the neoclassical paradigm seems similar to that briefly described in the last section in that financial theory with static, timeless, equilibrium analysis cannot make much headway in solving the problems of uncertainty as well as of disequilibrium over historical time. In other words, a modern version of Keynes is an analytical set of uncertainty, disequilibrium, historical time and pervasiveness of false trading : " . . . . . if we delete from financial theory the assumptions of Walrasian tatonnement, Edgeworthian recontracting, market perfection, and infinite price adjustment velocities, then we are left without the ability to erect a general equilibrium theory at all, and economic theory is on that account so much the poorer" (Vickers (1972,p.125). In this respect, Keynes should be reappraised. "In imperfect market environments, in structurally disequilibrium situations, . . . . . Keynes spoke so much of "animal spirits" when it came to investment decisions in the economy, and. . . . . he was so concerned with residual uncertainty and entrepreneurial responsibility in relation to it" (ibid., p.132).

Turning now to treatment of uncertainty, Vickers starts with emphasising that the variables that bear on decisions are understood as "nondistributional variables" and the notion of probability should be replaced by that of possibility, the concept that Shackle has called "potential surprise", a *nondistributional* outcome variable. Facing a range of possible outcomes under the situation of uncertainty, the decision maker specifies the degree of *potential surprise*, or *disbelief* following Shackle. The potential surprise function cannot be transformed into probability density function. Letting  $x$  be an outcome, e. g., the present discounted value of the income stream generated by an investment, and  $y$  be the degree of potential surprise that the decision maker attaches to the various possible outcomes, then the potential surprise function  $y = y(x)$  describes the potential surprise attached to the entire range of possible outcomes.

The tradeoff between positive outcome and potential surprise is expressed in the *attractiveness function*, or the ascendancy function as defined by Shackle,  $R = R(x, y)$  or  $R = R(x, y(x))$ . The decision criterion can be derived as combining the iso-attractiveness contours from an attractiveness function with a potential surprise curve. More specifically, a decision map embodies the relation between the *standardised focus outcomes* which are the pair of values

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20 Coddington (1976).

21 See also vickers (1974) and (1975).

of the *standardised focus gain and standardised focus loss*. The point at which the potential surprise curve is tangential to an iso-attractiveness contour describes the *primary focus gain*. The standardised focus gain is the zero potential surprise equivalent of the potential focus gain. Similarly, the standardised focus loss is defined as having the property of the zero potential surprise equivalent of the potential focus loss which represents the point at which the potential surprise curve reaches the lowest attainable contour.<sup>22</sup> The rule on the decision map is similar to that on the well-known indifference curve.

Vickers demonstrates that : “Rather than assuming away the uncertainties for what they are and where they really exist, or reducing them to certainties or certainty equivalents by stochastic reduction methods where the calculus of distributional variables cannot properly apply, the real-world decision maker’s responsibility has been identified and provided with a logically robust framework of analysis for dealing with it” (ibid., p.172). Choice under uncertainty involves the potential surprise function, the attractiveness function and the decision map. All of these fundamental terms are unfamiliar. However, methodology is very attractive, at least at a theoretical level. Vickers concludes : “Choice has genuine meaning only when it is addressed to perceived alternatives in conditions of genuine uncertainty, choices between the perceptions of outcomes conjured in the mind and imagination of the decision maker. It is the recognition of the profound implications of these realities that brings a new freshness and relevance to economics as an intellectual discipline, and to the art of enterprise management and business administration” (ibid., p.173).

### 3.3 Veblen — — — American Counterpart of Keynes ?

“The material framework of modern civilisation is the industrial system, and the directing force which animates this framework is business enterprise. . . . This modern economic organisation is the “Capitalist System” or “Modern Industrial System”, so called. Its characteristic features, and at the same time the forces by virtue of which it dominates modern culture, are the machine process and investment for a profit.

The business man, especially the business man of wide and authoritative discretion, has become a controlling force in industry, because, through the mechanism of investments and markets, he controls the plants and processes, and these set the pace and determine the direction of movement for the rest. His control in those portions of the field that are not immediately under his hand is, no doubt, somewhat loose and uncertain ; but in the long run his discretion is in great measure decisive even for these outlying portions of the field, for he is the only large self-directing economic factor.

For a theoretical inquiry into the course of civilised life as it runs in the

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22 For more discussions, see Vickers, op. cit., pp.153 – 156.

immediate present, therefore, and as it is running into the proximate future, no single factor in the cultural situation has an important equal to that of the business man and his work.

In so far as the theorist aims to explain the specifically modern economic phenomena, his line of approach must be from the business man's standpoint, since it is from that standpoint that the course of these phenomena is directed. A theory of the modern economic situation must be primarily a theory of business traffic, with its motives, aims, methods, and effects" <sup>23</sup>

These are the very opening sentence of Thorstein Veblen's *The Theory of Business Enterprise* which was originally published in 1904. With those observations of modern capitalism, Veblen's basic methodological stance against neoclassical economics or marginal utility theory, so called, seems to be worth reviewing briefly here.

An article entitled "The Limitations of Marginal utility" originally appeared in *The Journal of Political Economy*, November, 1909. It was reprinted in *What Veblen Taught* edited by W. C. Mitchell, 1964 from which the following quotations are adduced. Veblen made an assault on marginal utility theory by pointing out its static character : " . . . . marginal utility theory is of a wholly static character. It offers no theory of a movement of any kind, being occupied with the adjustment of values to a given situations. . . . Neither can deal theoretically with phenomena of change, but at the most only with rational adjustment to change which may be supposed to have supervened"(Veblen (1964,pp.152 –153)). Contrary to the conception of marginal utility theorists, "for an understanding of modern economic life the technological advance of the past two centuries . . . . is of the first importance ; but marginal utility theory does not bear on this matter, nor does this matter bear on marginal utility theory"(ibid., p.153). This character turns out to be much more conspicuous when considering the methodological standpoint of marginal utility theorists, because "as to the causes of change or the unfolding sequence of the phenomena of economic life they have had nothing to say hitherto ; nor can they, since their theory is not drawn in causal terms but in terms of teleology" (ibid., p.152).

The failure of marginal utility theory is mainly due to its treatment of institutional phenomena. " . . . . wherever an element of the cultural fabric, an institutions or any institutional phenomena, is involved in the facts with which the theory is occupied, such institutional facts are taken for granted, denied, or explained away" (ibid., p.154). "Those cultural products (ownership, free contract, and the scheme of natural rights) are, for the purpose of the theory, conceived to be given *a priori* in unmitigated force"(ibid., p.157). " . . . . they (institutional phenomena) are included as postulates *a priori*. So the institution of ownership is taken into the inquiry not as a factor of growth or an element subject to change, but as one of the primordial and immutable facts of the order of nature, underlying

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23 Veblen (1904,1958,pp.7–8).

the hedonistic calculus" (ibid., p.166). Thus, the failure of marginal utility theory in analysing institutional phenomena in a systematic way is consistent with its statical character.

Furthermore, "the infirmity of this theoretical scheme lies in its postulates, which confine the inquiry to generalisations of the teleological or "deductive" order" (ibid., p.154). Under the guidance of the rational hedonistic calculus and the other psychological conceptions associated and consonant with it, "human conduct is conceived of and interpreted as a rational response to the exigencies of the situation in which mankind is placed ; as regards economic conduct it is such a rational and unprejudiced response to the stimulus of anticipated pleasure and pains" (ibid., p.155). "Such a theory can take account of conduct only in so far as it is rational conduct, guided by deliberate and exhaustively intelligent choice. . . . wise adaptation to the demands of the main chance" (ibid., p.156). "The immediate consequence is that resulting economic theory is of a teleological character. . . . "deductive" or "*a priori*" as it is often called" (ibid., p.158).

"It deals with this conduct only in so far as it may be construed in rationalistic, teleological terms of calculation and choice" (ibid., p160).

Veblen's criticisms of marginal utility theory which appeared almost a century ago seem still to be worth notice. In fact, most of Veblen's fundamental conceptions are surprisingly in common with those views against the neoclassical paradigm which have been briefly reviewed in the above sections as well as in the First and Second Essays.

So much for (philosophically amateurish) discussions of epistemological issues in an exegetical way. Methodological stance in economics, in general, is still an open question, reflecting a turmoil among economists.