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Convergence to Long-Period Positions

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Preface

Mauro Caminati Fabio Petri

The present double issue of Political Economy is entirely dedicated to the proceedings of the Workshop on *Convergence to Long-Period Positions*, held at the Certosa di Pontignano, Siena, Italy, on April 5-7, 1990. The Workshop was organized on our initiative by the Research Groups "Teorie dell'investimento nel breve e nel lungo periodo" and "Prezzi relativi, prezzi monetari e microfondamenti", with the collaboration of the Dipartimento di Economia Politica, Università di Siena.

It is hoped that these Proceedings will be of interest to a wide range of economists. The purpose of the Workshop was to discuss the legitimacy of the notion of prices of production as centres of gravitation of market prices. This terminology, and the fact that the framework of a majority of the contributions is that of a modern classical approach to value as reformulated by Sraffa and others, should not mislead the reader into thinking that, unless he is a 'Sraffian', the papers collected here cannot be of much interest to him. We believe that the opposite is much closer to the truth: the problems discussed in these papers would appear to be crucial for the whole of present-day economic theory. This is so because the very-short-period nature of the present-day dominant notions of (intertemporal or temporary) equilibrium is increasingly coming under criticism. The accusation of insufficient persistence, moved by Garegnani (1976) against these equilibria because they depend on given endowments of the several capital goods - endowments which would not remain unaltered during any time-consuming adjustment process — is gaining wider and wider acceptance: it is generally recognized that the auctioneer or similar adjustment mechanisms amount to assuming that the equilibration process takes no time, but "imposing the axiom that the economy is at every instant in competitive equilibrium simply removes the actual operation of the invisible hand from the analysis" (Hahn 1984, p. 4).

It is also widely recognized that the moment one admits, as one must, that disequilibrium processes involve time and 'false price' transaction and

production decisions, then "in the course of convergence to equilibrium (assuming that occurs), endowments change... the set of equilibria is path dependent... [this fact] makes the calculation of equilibria corresponding to the initial state of the system essentially irrelevant" (Fisher 1983, p. 14; and see, for similar statements, Bliss 1975, p. 210; Morishima 1977, pp. 80-81). It is thus increasingly admitted that if the equilibrium is to be seen as the stationary point of "the actual operation of the invisible hand", i.e. of time-consuming adjustment processes, then the composition of capital cannot be among the data determining the equilibrium, but must instead be included among the variables determined by the equilibrium itself (Zaghini 1990). The implication would appear to be that the only useful notion of equilibrium prices is the traditional notion of long-period normal prices (the ones obtaining when the composition of capital is treated as a variable, determined by the tendency to a uniform rate of return on the supply price of capital goods). There are therefore signs, within mainstream (i.e. neoclassical, or marginalist) economics itself, that a rehabilitation might be imminent of the traditional concern with long-period normal prices as the central theoretical notion in value theory. By the way, in applied economics, especially in industrial economics, this notion of normality has perhaps never lost its central role, as testified e.g. by the following quotation from an article on the relative intensity of competition in the USA and Japan: "In a dynamically competitive economy where entry and exit behavior is sufficiently strong, short-run deviations of profits should quickly disappear, and profits should stay near their normal levels" (Yamawaki 1989, p. 390; also see Mueller 1986). Now, this notion of long-period normal price (and normal profits) is simply the marginalist reformulation of the classical notion of natural prices or prices of production. All enquiry into the stability of prices of production would appear therefore to have relevance not only for the economists interested in a resumption of the classical, or surplus, approach to value and distribution, but for economic theory in general. Thus, included below are not only formal studies of the stability of models of gravitation to uniform-profit-rate prices, but also broader reflections motivated by these studies, sometimes directly touching upon the differences and similarities between classical and neoclassical conceptions, e.g. asking questions such as: "Must rational expectations be assumed in a classical long-period position?" (S. Parrinello), or, "In what sense is a long-period position as defined by Sraffa different from an Arrow-Debreu general equilibrium?" (C. Bidard, B. Schefold).

That a meeting on this subject might be useful was suggested to us by the fact that although technical research on gravitation models had been very intense in recent years, no major meeting dedicated to this topic had taken place since 1985 (see Bidard 1984, Semmler 1986), and the need appeared to be increasingly felt for a debate on the 'state of the art' on

the question, both among specialists and among the broader group of economists interested in the notion of normal prices.

Accordingly, we hoped that the Workshop would serve two connected purposes. The first was to compare the results reached in recent years on the stability properties of various kinds of models of gravitation of market prices to prices of production. Scarcity of funds for travel expenses made it unfortunately impossible to invite at our expense all the scholars who had worked on this topic. Still, all the European authors of papers on gravitation known to us were invited to participate in the Workshop as either speakers or discussants. With few exceptions due to force majeure, our invitation was accepted, and as a result we believe we can claim that the Workshop has permitted a better classification of the various approaches and results, and a better understanding of the differences among them. We consider that an introductory review of these issues, as non-technical as possible, might be useful to the general reader, and one of us has tried to write it — it follows the present Preface; the reader should also turn to it for brief indications of the contents of the contributions included in these Proceedings.

The second purpose was to satisfy the need which, we were persuaded, was strongly felt for a reflection on the meaning and relevance of the results achieved. For obvious reasons, technical papers are forced to confine this sort of considerations to footnotes or asides. To favour a broader discussion of these issues, a number of more 'methodological' communications were also invited. The Workshop confirmed that our intuition had not been misguided. The debate on these problems was passionate and absorbed a large part of the discussions time— and understandably so, since what was ultimately at issue was the legitimacy of the traditional method of economic theorizing since Adam Smith. Not all schools of thought were represented (e.g. no post-Keynesians were present); nonetheless an ample spectrum of methodological positions emerged. It is worth trying to render a bit the flavour of the debate, which further confirms, we think, the importance of the problems discussed in the more technical papers.

One position was, that assigning a central role to prices of production in the theory of value needs a formal demonstration of their general stability. But this position was not shared by a majority of the participants in such a stark form.

A more moderate variant was e.g. put forward, in which it was argued that, although a central theoretical role of prices of production might perhaps still be defended on other grounds (e.g. as benchmarks), an accumulation of instability results would at least delegitimise their description as centres of gravitation of market prices. The reason why only an accumulation of stability or instability results would be meaningful is partly clarified by L. Boggio. He writes in his contribution: "A particular vector can be an equilibrium for wide classes of dynamic models and one can never be sure

that all the relevant possibilities have already been discovered and fully explored"; but he adds, "we must certainly recognize that stability (instability) results obtained within plausible dynamic models must influence the degree of subjective credibility of the relevant equilibrium theory". Perhaps more radically, the criticism was advanced that formal studies of gravitation seem "unable either to disprove or to prove in general the gravitation of market prices towards production prices and therefore the validity of the method of long period states applied to the theory of value and distribution" (Parrinello), not only because a proof of local asymptotic stability would not be enough (a point also made by Boggio, Salanti and I. Steeedman), but also because — given the sensivity of stability results to the precise specification of the models and the numerical value of coefficients — a conclusive proof of stability or instability would require a perfect, i.e. totally correct, formalization of the dynamics of market prices, which would be an impossible task. A. Roncaglia basically agrees with Parrinello on this issue (see his note 5), and goes beyond the latter in trying to argue that the notion itself of long-period positions is unnecessary to a resumption of classical economics, and philologically incompatible with at least Adam Smith's thought (a thesis which will certainly stir some debate). Still, Boggio, Parrinello and Roncaglia all appear to believe that prices of production and effectual demands remain useful notions, not only as theoretical benchmarks, but also as empirically significant: Parrinello suggests that the empirical correlates of the price-of-production/effectualdemand point should be ascertainable; Boggio's concern with "the most promising way forward" in order "to build a dynamic out-of-equilibrium theory of long-period prices" would be difficult to justify if the notion of long-period prices did not appear to him to have some empirical correlate; and Roncaglia writes that "Production prices express in a pure form the working of the factors — technology, income distribution — which the whole of the Classical tradition considers to exert the most important direct and systematic influence on relative prices."

Salanti would clearly object that Roncaglia's lines just quoted are very similar to those by Eatwell and by Milgate, which he criticises for taking for granted what should be, if not theoretically, then at least empirically, corroborated. As a matter of fact, at the Workshop, the absence was regretted of contributions directed at assessing the empirical evidence on the issue. Sill, at least some participants felt that some empirical corroboration does exist. In the final discussion session Petri argued that not only classical economists, but all marginalist authors too, Walras as well as Marshall or Wicksell, took it for granted that prices gravitate toward normal prices, i.e. prices just covering costs inclusive of the normal rate of return on (the supply price of) capital — once allowance is made for those elements of monopoly, or barriers to entry, or dynamic advantages (e.g. learning by doing), which may prevent that gravitation from operating

fully, or may sometimes oppose it for long period in certain sectors. This unanimity in the history of economic thought, he argued, is *prima facie* strong evidence that the tendency of rates of profit towards uniformity must have been an *observed fact*; and both casual and systematic evidence also support such a view: indeed, empirical studies showing a tendency of profit rate differentials to shrink through time do exist, e.g. Mueller (1986) (see also the references given by G. Duménil and D. Lévy, note 1). Therefore, he concluded, while looking for general convincing explanations of the tendency toward a uniform rate of profits, — a task whose great importance is not denied — in the meantime one has the right to take this tendency as a fact, or as an assumption one may start from, in one's theory of competitive market economies.

Other discussants agreed that profit rates, even if perhaps not always gravitating towards uniformity, do appear to remain within boundaries: perhaps some force, e.g. derivative control, comes into operation when the differentials become considerable. Others, in the face of the instability of pure cross-dual models, argued that the observed absence of such instability in actual economies should be explained through the stabilizing role of demand substitution, or of direct quantity responses without price changes.

It would therefore seem that a majority of the Workshop participants agreed that prices of production represent in some sense a guide to the persistent components of competitive market prices. Less unanimity existed on whether in order to have that role prices of production should be asymptotes, averages of, or (possibly bold) approximations to some averages of market prices. More on these issues is said in the Introduction.

We would like to thank not only the speakers and discussants but also the other participants for their constructive and active contribution to the Workshop's sessions. We had a distinct feeling that the meeting served its purpose of stimulating interaction and debate, permitting a useful clarification of differences of opinion. We are therefore very pleased to be able to publish the Proceedings of the Workshop, and very grateful to *Political Economy* for kindly making this possible, and at short notice. In this connection, it should be mentioned that the Editorial Committee agreed that this special issue could depart in some respects, notably citations, from the usual editorial format of the Journal.

These Proceedings include revised versions of nearly all the main papers, discussants' comments and communications presented at the Workshop.

Given the basic aim of stimulating debate, the discussants were invited to feel free to introduce into their comments considerations not strictly pertinent to the paper to be discussed; also, some contributions include observations added after the Workshop and commenting on issues raised by other papers or during the discussions.

One word on the order of presentation. An effort was made at the Workshop to arrange the papers in an order favouring the interaction of the various sets of questions. After an opening session which gave an overview on models of gravitation, and before going on to discuss the papers concerned with specific gravitation models, it was deemed useful to have a session of more methodological papers. To reflect this logic, the contributions by C. Bidard and B. Schefold (although presented in a subsequent session) are here included in Part II. Apart from this change, the order of presentation is the same as at the Workshop.

We would like to thank all contributors fo making quick publication of the Proceedings possible. In particular we would like to thank Professor Boggio, who, not being able to submit the important paper which opened the Workshop (which had already been promised to another Journal), kindly wrote a shortened version for inclusion in the present Proceedings, and Professor Schefold, who has managed to write a long and careful comment on Professor Bidard's paper, despite receiving the text of the latter very late.

We wish to thank the Università di Siena for giving permission to utilize the Certosa di Pontignano facilities, the Certosa staff for its helpfulness, the Italian Ministero dell'Università e della Ricerca Scientifica e Tecnologica (MURST) for financial support, and particularly, the excellent secretarial assistance of Barbara Engelmann and Regina Schenkendorf.

References

- Bidard, C. (ed.), 1984, *La gravitation*, Cahiers RCP 685, CNRS, Université de Paris X, Nanterre.
- Bliss, C. J., 1975, "The reappraisal of Keynesian economics: an appraisal", in M. Parkin, A. R. Nobay, eds., *Current economic problems*, Cambridge: Cambridge University Press.
- Fisher, F. M., 1983, *Disequilibrium foundations of equilibrium economics*, Cambridge: Cambridge University Press.
- Garegnani, P., 1976, "On a change in the notion of equilibrium in recent work on value and distribution", in M. Brown, K. Sato, P. Zarembka, *Essays in modern capital theory*, Amsterdam: North-Holland.
- Hahn, F. H., 1984, "Introduction", in id., Equilibrium and macroeconomics, Oxford: Basil Blackwell.
- Morishima, M., 1977, Walras' economics, Cambridge: Cambridge University Press.
- Mueller, Dennis C., 1986, *Profits in the long run*, Cambridge: Cambridge University Press.
- Semmler, W. (ed.), 1986, Competition, instability and nonlinear cycles, Frankfurt: Springer Verlag.
- Yamawaki, A., 1989, "A comparative analysis of intertemporal behavior of profits: Japan and the United States", *Journal of Industrial Economics*, XXXVII, 4, June, 389-409.
- Zaghini, E., 1990, "Quale equilibrio?", Economia Politica, VII, 1, April, 3-12.