

# Oscar Lange's Contribution to Economics

## A Brief Survey

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OSCAR Lange enjoys the unique distinction of having been an active and practising socialist who won recognition for theoretical rigour and scientific objectivity even outside the socialist world. As an economist he realised that economic theory was essentially a technique of reasoning with its own objective scientific structure. He was neither apologetic for making use of the analytical techniques developed mostly by the neo-classicists, for he did not deem it heresy to borrow useful scientific techniques, nor did he indulge in aggressive defence of outworn tools under the misconception that clinging to obsolete tools was part of establishing one's socialist convictions. As a socialist, he realised the importance of organisational and institutional factors in determining the course of the evolution of an economy.<sup>1</sup>

The administration of scarce resources is influenced by the institutional and organisational structure of society. In the first place, the wants which the resources are directed to satisfy are determined by the standards of civilisation evolved historically. Secondly, the way in which scarce resources are procured, utilised and distributed among different persons is also influenced by prevalent organisations and institutions. Thus, economic laws can be understood and interpreted in the context of a given institutional set up. However, Lange emphasised again and again that this did not rule out the universal applicability of a logical system of analysis. For any given set of social objectives and with specified assumptions regarding empirical conditions, conclusions could be drawn by using the rules of logic and verification which have inter-personal validity.

Without totally rejecting "bourgeois" economics on ideological grounds, Lange assessed dispassionately the relative merits of the Marxian mode of analysis and the "bourgeois" economics systematised by Marshall.<sup>2</sup> The latter had failed to build up a consistent theory of economic evolution and tended either to deny the existence of historical tendencies (like that towards the creation of oligopolies) or gave only a historical description. Its excellence, however, lay in being able to develop a formal theory of economic equilibrium for an exchange economy

which could describe the day to day operation of a capitalist economy more or less satisfactorily. Marxian Economics, however, had a broader temporal vision in that it developed a theory which purported to investigate the causal mechanism that seemed to guide the evolution of a capitalist economy. Lange clearly recognised that this was due not to any inherent superiority of the concept of labour theory of value but to the exact specification of the institutional datum which demonstrated the "necessity" and the "inevitability" of economic change, and that the theory of exchange and the pricing process based on formal principles of economic equilibrium had a general applicability even though the concrete results of the economic equilibrium process would be modified by the mode of ownership of resources, etc. As a guiding principle of allocation "the Law of value" was as much relevant to a socialist economy as to a capitalistic one even though the mode of its operation was bound to be different in the two systems.<sup>3</sup> Lange was objective enough to point out that the labour theory of value was not adequate to the task and that, therefore, the methods and techniques of marginal analysis could be profitably used.

From the point of view of methodology, then, Lange's masterly contribution lay in judiciously discriminating the objective elements from the normative, the essentials from the in-essentials, the objective rules of logic from the specification of empirical historical conditions. As a scientist, his merit was that he was not carried away by the universality and generality of analytical techniques to reach fallacious conclusions about the universality of the concrete results obtained from applying those techniques to given historical situations; nor was he overwhelmed by the importance of institutional factors to conclude that "bourgeois" economics was completely irrelevant to the management of a socialist economy.

His uncanny knack of sifting and synthesising and his ability to see the inherent similarities of logical structures and to explain differences in results is evident in many of his theoretical contributions which appeared in the forties. His thorough schooling in the Walrasian system proved to be a valuable asset to him. Thus in his well-

known article "Say's Law — A Restatement and Criticism"<sup>4</sup> he investigated the relationship of Say's Law to the general theory of prices and to the theory of money and showed how the proposition that there could be no excess of total supply of commodities (since the total supply of commodities is identically equal to demand for all commodities) held only under the special assumption regarding the nature of demand for money that money functions only as a medium of exchange and that, there is *no* desire to change the total cash balances in the economy except to adapt then to changes in money supply. With this special assumption, the proposition, he demonstrated, was only a simple corollary of the Walrasian formulation of the theory of prices. Lange exposed the contradiction in the classical treatment of the theory of money: Either Say's Law could be accepted, leaving money prices indeterminate or prices could be made determinate at the cost of discarding the assumption of neutrality of money and hence Say's Law. The analysis of money, he thus showed, had to be built into the general theory of relative prices and not treated independently and later plastered upon it.

In his "The Rate of Interest and the Optimum Propensity to Consume" he demonstrated more positively how the Walrasian theory could accommodate money and that, so far as monetary statics is concerned, most of the propositions about money and monetary processes are either contained in the Walrasian system or could be derived by making additional assumptions. In this sense, both the traditional and Keynesian analysis were a special case of the more general Walrasian system.

The same integrating vision, bringing together a number of propositions within the framework of a more general analysis, is also evident in his "The Place of Interest in the Theory of Production"<sup>6</sup> where he restated many of the fundamental propositions in the theory of rate of interest in the context of the general theory of production and pricing. Also his "Complementarity and Interrelations of Shifts in Demand"<sup>7</sup> made clear the notion of complementarity in demand and showed how the Keynesian and the classical analysis concerning the effects of changes in the desire to hold

cash could be brought together. The classical theory had thought exclusively of substitution between cash and commodities and the Keynesian analysis mainly of that between cash and securities. However, since the desire to hold cash could lead to a substitution of cash for both commodities and securities, the increase in liquidity preference could affect commodity prices and/or employment, not only indirectly *via* the rate of interest but also directly through a downward shift in the demand for commodities.

Among his more well known theoretical contributions is his book "Price Flexibility and Employment" which appeared as a monograph of the Cowles Commission. There he put to remarkable use the apparatus of the general equilibrium theory. The genesis of this work was the long-drawn controversy regarding wage flexibility and unemployment between the Keynesians and the neo-classicists. Lange examined the problem of price flexibility and employment in the wider context of the processes which upset equilibrium and which prevented its automatic restoration *via* flexible prices, such as the tendencies towards oligopolisation, the growth of technological unemployment, worsening of investment conditions, etc. Even though some of his conclusions were in line with Keynesian thinking on wages, employment and monetary policies, his policy recommendations were strongly anti-monopolistic and more staunchly socialistic in orientation. With the tendencies towards oligopolisation of the economic structure he feared that the anti-crisis policies of Keynes working through the multiplier effect of investment would not be sufficiently strong.

Lange will also be remembered for his contribution to welfare economics. In his much referred to article "Foundations of Welfare Economics"<sup>8</sup> he lucidly presented two sets of propositions in welfare economics: the one, based on maximization of a vector of utilities, permitting increase in one individual's utility only when it does not diminish another individual's utility without concerning itself with the problem of the optimum income distribution: and the second, based on maximization of a social value function where maximising conditions are specified directly in terms of commodities and incomes allowed to different individuals or in terms of marginal utilities. These propositions did not require that utility be measurable.

Lange was, of course, no mere theo-

rist. He could rise to great heights in theoretical abstraction but he was also intensely aware of one of the essentials of economic theory, namely, its operational validity. His widely acknowledged piece of creative contribution, the essay "On the Economic Theory of Socialism", carried forward the analysis of Taylor in demonstrating the applicability of the trial and error procedure implicit in the competitive market pricing mechanism to decentralized decision-making in a socialist system. The parametric function of prices was fully exploited here in order to evolve a procedure by which efficient decision-making under centralized socialist management could be undertaken in a manageable fashion. The rules of optimization to be followed were similar to those under competitive markets — in fact, the trial and error procedure was to mimic the competitive mechanism in its method of successive approximations. This well-known paper of Lange, together with A P Lerner's excellent work "Economics of Control" opened up a new held in welfare economics and the theory of planning. No doubt, Lange's exposition left many loose ends like the possibility of convergence of successive approximations, the exact magnitude of adjustments required at every step. etc. These problems have since been taken up for more rigorous and exact formulation.

Lange saw in econometrics, linear programming and cybernetics the possibility of evolving efficient planning techniques. Himself a statistician, he had papers in both theoretical statistics and in econometrics to his name. He devised a simpler and a direct method of deriving elasticities of demand and supply.<sup>9</sup> His paper on "Some Observations on Input-Output Analysis"<sup>10</sup>, which he wrote during his stay at the Indian Statistical Institute, Calcutta, in 1955-56 contains an excellent exposition of input-output analysis as a tool for planning. He wrote also a book, "Introduction to Econometrics" to bring out the relevance of econometric techniques to planning. His interest in planning was not just methodological. He himself assisted plan formulation in India (during the Second Plan period), Ceylon, UAR and Iraq where he was specially invited for (he purpose. In his home country, Poland, he was continuously associated with planning. What brought freshness to his approach was his constant awareness that the methods of planning and economic management themselves were influenced by the growth of productive forces and new procedures would have to be evolved

to suit the nature and pace of the changes in productive forces.

In 1957, Lange began work on a monumental project—a systematic account of political economy, which he planned in three volumes. The plan was born out of the conviction that "individual economic problems are bound together in a whole and it is difficult to grasp them in isolation. To resolve those problems it is also necessary to bear in mind the current state of scientific literature and contemporary historical experience. It is only in this way that Marxian scientific thought in the held of political economy is possible". The first volume, which has been translated into English, dealt with the more philosophical problems of methodology the connection between political economy and the materialist interpretation of history, the nature of economic laws, the relation of political economy to sociology, the problems of social conditioning and the social functions of economic knowledge. The second volume dealt with the theory of reproduction and accumulation, market production and price formation. The last was to be devoted to a detailed analysis of the mode of operation of the law of motion of capitalist and socialist formations.

Lange's contribution thus ranged from abstract theory to practical problems of planning, from discourses on methodology to the formation of plans for development. The wide range of Ivs intellectual interest, however, did not mar the excellence of his work; in fact, awareness of reality lent direction and purpose to his theoretical efforts and the theoretician in him restrained him from casual and imprecise generalisations.

#### Notes

<sup>1</sup> See his "The Scope and Method of Economics", *Review of Economic Studies*, 1945-46.

<sup>2</sup> "Marxian Economics and Modern Economic Theory", *Review of Economic Studies*, 1934-35.

<sup>3</sup> "Marxian Economics in the Soviet Union" *American Economic Review*, 1944-45,

<sup>4</sup> "Studies in Mathematical Economics and Econometrics".

<sup>5</sup> *Economica*, 1938.

<sup>6</sup> *Review of Economic Studies*, 1936.

<sup>7</sup> *Review of Economic Studies*, 1940.

<sup>8</sup> *Econometrica*, 1942.

<sup>9</sup> *Econometrica*, 1942

<sup>10</sup> This together with his other two essays appeared in "Essays on Economic Planning", published by the Indian Statistical Institute, Calcutta.