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69 The socialist calculation debate

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The socialist calculation debate is an episode in twentieth-century economic thought that has special significance for Austrian economics. On one side of the debate were economists either trained or influenced by the Austrian tradition of Menger, Wieser and Böhm-Bawerk who believed socialism and central planning could not improve upon the economic performance of a regime of private property and free markets. On the other side were professional neoclassical economists who were critical of market economics because of their perceived failures to achieve full employment, equitable income distributions and rational investment and who wished to find some method of central planning that would duplicate the potential efficiency of free markets without suffering their very real shortcomings.

The events of the debate are easily recounted (Vaughn, 1980). It began in 1920 when Ludwig von Mises wrote an article claiming that socialist central planning was inherently irrational and hence impossible to achieve. Mises was answered, directly and indirectly, by neoclassical economists such as H.D. Dickinson, Maurice Dobb, Abba Lerner and Oskar Lange who understood his reasoning but believed they could design a socialist economy that met Mises's objections and would actually improve upon the economic performance of market economies. Friedrich Hayek, Mises's younger colleague, entered the fray in the 1930s and wrote a series of profound critiques of socialism that were largely misunderstood by the opposition. By the mid-1940s, conventional opinion held that Mises had been wrong and socialism was in fact possible, and the Austrians lost the debate. That opinion was to hold for most of the next 40 years, until the disintegration of communism and the obvious economic failures of central planning required a re-evaluation of the Austrian arguments.

Despite the Austrian school's putative defeat, the debate was a watershed event in the development of Austrian economics. What began as a challenge to conventional views about the feasibility of central planning evolved into a debate not only about alternative political and economics institutions, but also about the status and usefulness of neoclassical economic theory itself. During the course of the more than 20 years during which the debate was carried on, Austrian economics underwent a transformation that eventually redefined what Austrian economics meant and what it had to contribute to economic science (Vaughn, 1990). Many of the issues first raised during this

debate are unresolved in either the Austrian or the conventional neoclassical literature to this day.

Mises and the old Marxists

The set of writings that were to constitute the debate over economic calculation under socialism were generally responses to Mises's article, 'Economic calculation in the socialist commonwealth' (1920). This article was directed primarily at an audience of older Marxists who, despite their belief in the superiority of conscious control of economic life, were astonishingly unconcerned about the details of actually running a centrally planned economy (Lavoie, 1985, pp. 28ff). Many of them believed it was enough to eliminate private property and money in order to eliminate scarcity. What plans they did advocate for running a socialist society paid little attention to the accounting that would be necessary to make certain that income matched outgoings, let alone to efficient use of resources.

Mises, reiterating arguments made earlier by Wieser and Barone (Hayek, 1935, pp. 245ff) argued that the economic problem of managing scarcity was unavoidable in the real world and would be no less a problem for a socialist as for a capitalist economic order. In a capitalist regime, the way resources were managed was through private property and exchange in markets. The necessary accounting that makes certain that expenditures do not exceed income and that measures in some way the efficiency of resource use, he argued, were market prices. Prices are ratios of exchange values, and hence are necessary to allow people to weigh the relative values of alternatives and to make 'economic' decisions. Not only did Mises assert the importance of prices to making rational economics decisions, he also insisted that the only way in which meaningful prices could be established was in a regime of private property and free exchange. Central planners might try to decree prices for resource management but, unless these prices bore a close relationship to the way individuals value alternative goods, they would be meaningless. And the only way to ensure that prices bore the required relationship to individual judgements of value is to allow them to be established freely in markets. Socialist economy, therefore, was impossible.

Mises not only charged socialism with being unable to establish prices that actually measured relative resource scarcities, he also criticized the ability of central planning to produce the goods and services that needed to be priced. State-run firms, he argued, where managers were neither owners nor responsible to owners, would be riddled with inefficiencies. Without the incentives that flow from property ownership, managers would act irresponsibly with the resources under their direction, tending to take greater risks with the firm's resources than would private managers. There would be little direct accountability to consumers.

To modern ears, Mises's argument might seem incomplete, but it does not seem very radical. Certainly, the claim that prices are necessary for efficient economic choice is well established and that bureaucrats face different incentives from workers in the private sector is by now totally uncontroversial. What seemed intolerable to Mises's contemporaries, however, was his insistence that only free markets and private firms could establish economically meaningful prices and produce wealth efficiently. This was regarded as a gross overstatement of the advantages of the free market. Surely, given the economists' knowledge of mathematics and statistics, it would be possible for prices to be established in some other more 'equitable' way than through the rough and tumble of the market.

The socialist solution

While Mises's argument may not have convinced dyed-in-the-wool Marxists, he did present a challenge to conventional neoclassical economists who understood the necessity of prices for efficient resource allocation but who were also critical of the market failures associated with capitalism. They took it for granted that central planning was the way to correct those failures and concentrated their attention on trying to find ways to duplicate the efficiency of market pricing in socialist regimes.

Some of the proposals were reflections of the economics profession's newly developing romance with mathematics and statistics. Hence several economists (see in particular Dickinson, 1933) proposed variations on the theme of using extensive statistical sampling to estimate demand equations for all relevant goods and, together with estimated production functions, 'solving' for equilibrium prices. They were subject to swift and telling rebuttal by critics, the foremost being Friedrich Hayek. As a professor at the London School of Economics from 1932, Hayek was in the thick of the attempts by socialist economists to resolve the problem of planning. In his response to the proposals to set prices via central planning, Hayek raised issues that were to define the Austrian side of the socialist calculation debate.

Hayek basically had two kinds of arguments against the socialist proposals. The first had to do with the kind of knowledge socialist planners would be able to employ in their decision making and the second had to do with the incentives facing actors in socialist economic institutions. For example, contrary to the 'mathematical solution' to socialist planning, Hayek argued that, in an advanced economy, there are typically hundreds of thousands of products bought and sold every day. Even if it were possible to define all of the products to be priced, it would be a virtual impossibility either to gather enough relevant data to specify the demand and supply equations or to actually solve a system of hundreds of thousands of simultaneous equations

(especially without the aid of computers, as was the case in 1930) (Hayek, 1935, pp. 209–13).

While Hayek had a number of other cogent criticisms the socialists took this one to heart immediately. As a consequence, one of their number, Oskar Lange, devised an ingenious system to generate economic prices in a centrally planned economy that did not require widespread statistical data gathering or the solving of numerous simultaneous equations but still yielded equilibrium prices that duplicated the success of the market while setting up an institutional structure that would also guarantee a fairer income distribution than capitalism was capable of achieving.

Lange's trial and error solution

Lange's solution (1939) to the problem of pricing in a centrally planned economy is worth examining for several reasons. First, for over 50 years it was regarded by professional economists as *the* answer to Mises and to the Austrian criticism of rational central planning. Second, it demonstrates in a clear-cut form the way economists understood both the workings of an actual economy and the relationship of economic theory to economic reality. The 'simultaneous equation' solution to pricing under socialism was an attempt to employ the mathematics of Walrasian general equilibrium theory. Lange also attempted to employ Walrasian theory, but from a different perspective. He argued that a socialist economy could be run in the following way. All consumer goods would be bought and sold in private markets, but 'the means of production' would be produced in state firms that would be under the direction of the central planning board (hereafter, CPB). The CPB would communicate a set of prices to the state firms and the firms would be instructed to minimize cost subject to those prices. The brilliance of Lange's plan was that it was irrelevant what the initial prices actually were since the firms would also be instructed to communicate to the CPB any surpluses or shortages of goods. From that information, the CPB, acting as Walras's auctioneer, would either raise or lower price accordingly. Hence, just as in real markets, prices would be the consequence of a 'tâtonnement' or trial and error process that would eventually settle into equilibrium. This obviated the need for detailed statistical knowledge of supply and demand and allowed the CPB to operate effectively on a minimum of information.

Hayek responded to this scheme by raising objections that were later to be recognized as being particularly Austrian insights into the nature of a market economy. He argued first that it would be virtually impossible for a CPB correctly to define all the products that are bought and sold even in capital goods markets. Lange was tacitly assuming all products were objectively definable and easily categorizable. Rather, Hayek argued, capital goods were heterogeneous in nature, often tailored to the individual user. In Lange's

scheme, the CPB would set prices, not for real goods that people wish to buy and sell, but statistically tractable aggregates that suited no one in particular (Hayek, 1948, pp. 188–9, 193).

Hayek also argued that the products that people buy and sell are not solely objective entities. There is a large non-material component to goods, involving, for example, ease of availability, quality of service or reputation of supplier, that could not figure in government statistics. Even if goods could be correctly defined, however, Hayek believed that trial and error pricing was still doomed to failure because it could not respond as quickly or in the same way to changes in economic conditions as could individuals operating in decentralized markets. Lange's error was to presume that, once established, equilibrium prices would remain stable for long enough periods of time for CPB prices to be relevant to efficient decision making. At the time, Hayek argued that the socialists suffered from an excessive preoccupation with equilibrium states (1948, p. 188) to the exclusion of consideration of market processes. The implication was that equilibrium was a useful tool for organizing theories about the direction of change of market prices but that, in real life, prices were constantly undergoing a myriad of small adjustments made by actual buyers and sellers in response to changing conditions. Centrally directed trial and error pricing could not duplicate the efficiency of these small adjustments because they would be looking at statistics rather than actual conditions in markets.

This line of argument led Hayek to emphasize the importance of specialized, particularized knowledge for the efficient operation of market systems. The knowledge that is important in markets is not usually scientific, abstract knowledge such as is assumed, for example, in the theory of production functions, but detailed knowledge of 'time and place' that an actor may not even know he possesses until called upon to make a decision. Hayek was later to emphasize even more the role of tacit or inarticulate knowledge in markets, leading Austrians to adopt the 'knowledge problem' as a central concern of their research.

Like Mises before him, Hayek also objected to the cavalier way state firms were imagined to behave under socialism. Hayek also argued that the incentive structure facing state employees was relevant to their behavior and that they would be unlikely to behave in the same way as private workers (1948, pp. 198–9). Where Mises had argued that they would engage in more risky behavior since their own wealth was not at stake, Hayek presented a more convincing picture of state managers who would be loath to take any risk at all for fear that a negative result could not be justified after the fact. He reasoned that all production decisions were based on conjectures about future states of the world that could not be predicted with certainty. Even costs were not objective numbers but the subjectively estimated value of imagined for-

gone alternatives. Hence, where a manager's decision would be subject to review by a higher and more remote authority, that manager would try to make decisions that could easily be justified according to reportable criteria rather than the decision that seemed more profitable according to his own specialized or personal knowledge.

Despite Hayek's many telling criticisms of market socialism, by the middle of the 1940s the Austrians were considered by the economics profession to have lost the debate. The mainstream of the profession accepted the logical cogency of Lange's plan and regarded Hayek's criticisms as minor complications that in no way undercut the possibility of socialism. It was not until the 1990s, when the Soviet Union imploded, and when formerly communist countries all over the world were trying to reintroduce market economies as quickly as they could, that it was generally conceded that the Austrians had been correct after all in their assessment of the possibility of a centrally planned economy that could match the efficiency of capitalism.

While history may have presented a practical vindication of Mises and Hayek, on the theoretical level, aspects of the debate are still being waged. The heart of the Austrian critique (admittedly only fully articulated even by Austrians in the last decade) is that static equilibrium theory does not capture the important features of real market economies. Not only individual valuations are subjective in nature; so are expectations and the knowledge they hold about the real world. Indeed, Hayek's early conjectures about economics and knowledge have become a primary focus of the modern Austrian school. Similarly, the rejection of static equilibrium as a tool for designing an economic system has led to an investigation of the importance of real time to our understanding of economic theory. The early recognition of the incentives problem in socialist firms led Austrians to question the general relationship between institutions, rules structures and market activity. And finally, Hayek's frustrations during the calculation debate led him to reassert in more modern form the eighteenth-century discovery of markets as essentially unplanned and unplannable social orders, thereby providing Austrians with an articulation of their paradigm. How they will carry that research forward in the future is still to be seen.

See also:

Chapter 4: Market process; Chapter 25: Prices and knowledge; Chapter 14: Competition; Chapter 33: Comparative economic systems

Bibliography

Dickinson, H.D. (1933), 'Price Formation in a Socialist Community', *Economic Journal*, **43**, 237–50.

Hayek, Friedrich A. (1935), *Collectivist Economic Planning*, London: George Routledge & Sons.

Hayek, Friedrich A. (1948), *Individualism and Economic Order*, Chicago: University of Chicago Press.

Lange, Oskar (1939), 'On the Economic Theory of Socialism', in Oskar Lange and Fred M. Taylor (1938), *On the Economic Theory of Socialism*, ed. Benjamin E. Lippincott, New York: Augustus M. Kelley, 1970.

Lavoie, Don (1985), *Rivalry and Central Planning: the Socialist Calculation Debate Reconsidered*, Cambridge: Cambridge University Press.

Mises, Ludwig (1920), 'Economic calculation in the socialist commonwealth', republished in F.A. Hayek, *Collectivist Economic Planning*, London: George Routledge & Sons, 1935, pp. 87–130.

Vaughn, Karen I. (1980), 'Economic calculation under socialism: the Austrian contribution', *Economic Inquiry*, **18**, 535–54.

Vaughn, Karen I. (1990), 'The Mengerian roots of the Austrian revival', in Bruce Caldwell (ed.), *Carl Menger and His Legacy in Economics*, Durham, NC: Duke University Press, pp. 379–407.