

# Perestroika: Can It Work?

by Manuel F. Ayau and Julio Cole

It is all very well to hail *perestroika*—the current moves toward liberalization of Soviet bloc economies, the establishment of “profits” as incentives for Soviet managers, and steps to organize Soviet production in a more businesslike manner. But all these changes soon will bring disappointment, for technical reasons.

It isn't enough to imitate the marketplace. The essential ingredient of a market economy is the private ownership of scarce resources and the means of production. And even with *perestroika* this ingredient is missing.

The technical reasons have to do with a problem which continues to be ignored by most people, and indeed by most economics professors. In the 1930s, when it was debated in small intellectual circles in Europe, it was called the Problem of Economic Calculation.

Simply stated, we live in a world of scarcity, and no matter how a society is organized, we always will need some means of deciding how resources can be put to the best use. In a capitalist society, free market prices provide the answer. Competition among buyers and sellers in a free market established relative prices which eliminate the least economic (least profitable) uses of each particular unit of a resource, inducing the use of substitutes which in turn must be withdrawn from other uses by the same marketplace process. All of this happens only because resources and the means of production are privately owned—they can be bought and sold and consequently have market prices. How this happens is amply explained in economics texts, although seldom are students reminded that it happens only in economies with private ownership.

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Published by  
The Foundation for Economic Education  
Irvington-on-Hudson, NY 10533

## Problems of Allocation

What has yet to be explained is how a true socialist society (one that doesn't copy capitalist prices) could carry out this necessary task of efficient allocation. Ration cards, queues, and income controls are used today in so-called socialist countries, along with arbitrarily determined shadow prices, to ration consumer goods. But how would the planning czar determine how best to use, say, one additional pound of silver when confronted with such competing uses as more X-ray film, industrial film, microfilm for banks, tourist film, jewelry, electronic contacts, tooth fillings, and wart removals? Remember that he also would have to decide on the price relationships of all the inputs used to produce the pound of silver, as well as the prices of all the things of which it becomes a part. And we must bear in mind that he cannot simply sum up the costs, since costs themselves are prices.

The problem of economic calculation was brought to the attention of the academic community by Ludwig von Mises in 1920. In referring to Mises, the famous socialist theoretician Oskar Lange wrote in 1936, “it was his powerful challenge that forced the socialists to recognize the importance of an adequate system of economic accounting to guide the allocation of resources in a socialist economy. Even more, it was chiefly due to Professor Mises' challenge that many socialists became aware of the very existence of such a problem. . . . the merit of having caused the socialists to approach this problem systematically belongs entirely to Professor Mises. Both as an expression of recognition for the great service rendered by him and as a memento of the prime importance of sound economic accounting, a statue of Professor Mises ought to occupy an honorable place in

the great hall of the Ministry of Socialization or of the Central Planning Board of the socialist state."<sup>1</sup>

The nature of the problem of economic calculation is that of assigning relative prices to millions upon millions of items, each of whose price is a function of all other prices, with the ultimate deciding factor for each price being the ever-changing subjective valuations of millions of consumers.

Though it is sometimes useful conceptually to represent the economic problem as a system of simultaneous equations, solvable "in principle" by an omniscient central authority, it is utterly naive to assume that even the simplest problems could actually be solved even in this era of supercomputers. Toward the end of the last century, Italian economist Vilfredo Pareto showed that a simple "economy" involving only 100 people and 700 goods required the solution of 70,669 equations. The fantastic number of equations involved in the more realistic case of millions of people and millions of goods is mind-boggling. And this mathematical approach completely overlooks the subjective and therefore unmeasurable nature of consumer valuations, as well as the critical role of entrepreneurs who strive to discover and meet changing consumer needs and wishes.

Even assuming that the "Central Authority" could paternalistically decide upon the proportions of final consumer goods to be produced (i.e., how much of each commodity is "good" for the people), the main problem is how to produce the desired outputs—determining which of the myriad of technically feasible input "mixtures" is most efficient. The fact that the leading Soviet planning theorist, L. Kantorovich, managed to discover the problem in 1939 is one of the most curious incidents in the history of modern economics. He found that the correct solution of a production problem given several inputs and several possible input combinations, required the introduction of certain auxiliary variables which he called "allocation coefficients." As it turned out, when Western economists read his paper after the war, they realized that these "allocation coefficients" were simply the prices of the different inputs.<sup>2</sup>

Because we live in a world where things

have prices, we take them for granted. But market theory teaches us that prices are not established by "someone" or by some "authority." They arise from private exchange decisions made at the margin. It is the marginal buyer and the marginal seller who determine the market-clearing price. Socialist economic theory is based on the principle that values are objectively determined, so there can be no such thing as "the margin." The concept of "marginal rates of substitution" can have meaning in the determination of prices only where resources and the means of production are privately owned. And this excludes socialism.

What this boils down to is that no one has ever explained how socialism is supposed to work. (As an aside, it is worth noting that this is a very disturbing and serious matter, when one thinks of an academic world that grants recognition and prestige to people who unabashedly claim to be in favor of a system yet to be described!) Just because some totalitarian countries call themselves "socialist" does not mean that they actually operate in a socialist manner. If you are wondering how "socialist" countries go about setting their prices, it is simple: they copy them from capitalist countries, from Sears' catalogues, and from newspapers, adjusting them to their current plans. And whereas profit incentives are important motivationally, they are useless if decision makers lack the information to be able to economize resources and achieve efficiency.<sup>3</sup>

Myths die hard, and the myth of the feasibility of central planning is no exception. Failures will be blamed on people, on sabotage, and on the weather. Revolutionary new corrective measures again will be announced. Stay tuned: the new *perestroika* is coming. □

1. Oskar Lange and Fred M. Taylor, *On the Economic Theory of Socialism* (New York: McGraw-Hill, 1964), pp. 57-58.

2. Kantorovich had stumbled upon the technique of linear programming, which in the meantime had been independently discovered in the West by G. Dantzig and T. Koopmans, where it has been successfully applied to a wide variety of management problems. Ironically, it has been applied in socialist planning, for one simple reason. Linear programming is a way to determine the most efficient solution of a production problem for a given set of input prices. Of course, for any arbitrary set of prices there is a corresponding "best" solution. However, there is no way of knowing whether this "best" solution is in fact the true optimum unless the original input prices themselves are optimal.

3. For a detailed treatment of the problem of economic calculation, see Don Lavoie, *National Economic Planning: What Is Left?* (Cambridge, Mass.: Ballinger, 1985).