

Atomistic Decentralization and the Misunderstood Socialist Calculation Debate

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It was common knowledge for some time that the socialists had won the socialist calculation debate. In fact, it was only the reality of the fall of communism that finally swayed opinion.

The problem is that Mises and Hayek were misunderstood by mainstream economists. The conventional economic models made assumptions that were too stringent; socialists rightly pointed out that they were simplified and not fully accurate; the explanations by the anti-socialists were diminished by association with these simplified models; and both capitalism and socialism were left misunderstood while the correct theories were carried away in the wash.

The Debate

Those sympathetic to socialism criticized capitalism in several ways. They complained that capitalism created inequalities that were unfair: those few who owned the means of production got rich without even working while those who owned only their labor remained poor and in servitude. They complained that capitalism did superficially allocate resources efficiently according to supply and demand but that its inherent inequality meant that true demand was not served and hence the economy was not really efficient in allocation. Finally they argued that firms were consolidating, using leverage to end competition and using government to prevent new entry, leaving capitalism far less efficient than the models would suggest¹.

Socialists argued that with private ownership of production, any redistribution would be temporary as capitalists would continue to exploit workers and become richer, while workers' wages would be driven into the ground, and the increasing inequality would inevitably lead to collapse of the system and revolution. Only common ownership of the means of production would allow rational and fair allocation of resources and a stable economy.

Mises argued that calculation under socialism would be impossible. Common ownership of the means of production would mean no competition between suppliers and hence no prices for inputs; having no prices, alternate uses of inputs could not be compared. The

¹ We can safely put aside this last point, because we must distinguish between complaints leveraged against government intervention in the economy with complaints against free markets, and it is not within the scope of this article to discuss the former.

inability to compare alternate uses would doom the planning board to an economy built on guesswork and chaos and poverty would ensue.

Lange argued that a socialist economy would use trial and error just as a capitalist economy does. He argued then that the Central Planning Board would tell the firms to keep costs low and set the price right. From the preface to *On The Economic Theory of Socialism*:

We saw above that the virtue of a competitive market was the tendency of businessmen to minimize costs in combining the factors of production and to make the selling price cover the cost of the product. How are these two things to be achieved in a socialist economy? Lange's answer is that they must be laid down as working rules, as necessary conditions under which the plant managers are to carry on production.²

But can he truly believe that just telling plant managers to keep costs low and set prices correctly is going to be the same as having a force such as competition pressure individuals to maximize profits by cutting costs, competitively pricing their products and innovating?

The Models

The emphasis put on the problems admitted by Lange regarding socialism (such as lack of interest rates, and the need to set down “working rules” for plant managers) is reduced in part because he saw so many problems with capitalism. But both the perceived problems with capitalism and the mistaken sense of ease with which “working rules” in socialism could direct the economy, are due to the same confusion over what the important component of the market economy is.

Socialists, along with many classical economists, understood the working of the market economy as dependent on *perfect competition*. Oligopolies, monopolies and “market failure” were seen as deep-rooted problems that undermined theoretical models, required intervention and proved that capitalism was flawed and a new system must replace it. Marxists admitted the efficiency and use of a market economy – so long as it was perfectly competitive, with a huge number of small firms competing in every industry. Lange also pointed out that even this perfect picture posed problems though, given that small firms do not have economies of scale. Socialism would replace competition, allow costs to match prices and profits to be evenly distributed among workers, while retaining economies of scale.

However, the truth is not that simple. Perfect competition isn't how markets work – but it isn't how they should work. And socialism can neither mimic perfect competition nor improve upon it. It is not *perfect competition* but *atomistic decentralization* that is key to the working of markets.

² On the Economic Theory of Socialism, Oskar Lange, Fred M. Taylor, McGraw Hill, 1964

The Market

The key to a functional marketplace is not that every firm must act as a perfectly competitive firm, as a price taker with no influence on the market. The real key to the effectiveness of the market is just that the firms are atomistic – they are units which act in their own self-interest and survival – they are in a Darwinian fight to win by growing, reproducing and defending themselves in the marketplace using all the tools available in the game.

In order to be truly atomistic, they cannot use a centralized force such as the government, but must depend on their own initiative. Firms have one general goal and all decisions become are taken based around achieving it, including pricing and output, hiring and firing, expanding and cutting costs, innovating, saving and contracting and going under.

This fight for survival directs the actions of every individual firm, whether the firm is in competition with a hundred others or whether it is involved in a small cartel of oligopolistic competitors or even if it is a sole monopoly in its industry. In a market with atomistic decentralization, each firm like an animal within a species (the firm's industry) fights for its own survival and will use whatever tactic, including deception of its competitors, to achieve its aims. Firms that are unable to survive are left to die – they are not saved by the state.

Collusion among firms is thereby often short-lived, as firms choose to defect for their own self-interest; cartels are destroyed as one firm finds it to its own advantage to lower its price and steal business from the rest. New firms enter and undermine these agreements by underbidding or selling low.

A monopoly is also short lived in a truly atomistic market. The profit that a monopoly takes in is like a bullhorn calling to all other firms and individuals that they should enter this market. If there is any way for another firm to enter this market profitably, though it takes research, innovation and investment to surpass the barriers, for his own selfish interest he will. Then the competition along with the new innovations will drop the price for consumers.

The Solution

Lange's argument that markets are not in an equilibrium state of perfect competition is valid – they aren't. Markets are always in flux not in stable equilibrium. But this is a problem with some of the models – not a problem with capitalism. On the contrary it is the vital force of a free market economy; it is what allows innovation, new industries, new forms of competition and lowering of costs.

But, sympathizers of socialism will argue that it is still just imperfect competition. Socialism could do better by redistributing profits, setting prices in order to fulfill a truer representation of demand, and allocating resources according to a rational plan instead of

an imperfect market improvisation. However, as the quote above points out, the only substitution for the forces of competition on firm was a set of “working rules.”

Lange describes two scenarios, In one the Central Planning Board sets a plan presumably with output targets for firms. In the other the plan is left to the market while the CPB only set prices. Let's consider the two separately.

The Solution: Planning

If the CPB sets output targets then it is these targets which direct the firms instead of profit maximization. If the CPB tells a firm to make 1000 pairs of shoes, this is what the firm will focus on above all else. If the simplest way to meet this goal is to make them identical, then they will be identical. If cloth is easier to obtain than leather, cloth will be used.

The CPB must recognize this and set guidelines for how things should be made, or multiple targets rather than a single target, in order to ensure that the firm produces the desired product in the desired amount. Rather than an atomistic marketplace of firms each honing in on a single Darwinian survival tactic of maximizing profits, we have a central agency providing (possibly multiple) goals to firms.

But the planner isn't omniscient. He doesn't know as much as the firm knows about how best to reach the actual target. So, inevitably the CPB will have to set rough guidelines, not specific step-by-step instructions. The firms are left not knowing how best to fight for survival (if indeed they are concerned about survival at all). If there is only one goal such as output, quality will be sacrificed. If the only goal is cost reduction, output may suffer. If multiple goals conflict, it is difficult to know which one should give way to the other. The only goal that takes all of the other goals into account is the goal of profit.

Planners can't fake the goal of profit. For profit to be a real indicator, decisions must be decentralized and products must be price responsive to demand by customers. Firms must actually be trying to please the customer and must be in a position to respond to their demands. They must be actually trying to maximize their profit, there is no faking it.

In a market economy when a firm is selling a product and the demand exceeds that which he can supply, he notices right away and either raises his price, if he thinks he can do so, or produces more. If he raises his price, others will see the profits and enter the market, so supply will increase either way.

The decentralization of information allows the economy to quickly respond to change – this is the dynamic nature that creates efficiency, innovation, competition and response to supply and demand that provide price information, and price information in turn allows the market to respond and adjust supply and demand. This is the ever-dynamic

equilibrium that produces an efficient market. It is also this firsthand knowledge and ability to respond that allows prices to contain true information about supply and demand.

The Solution: Market Socialism

Lange suggests that an imitation of perfect competition through trial and error pricing and the appearance at the end of a period of a shortage or surplus together would allow the CPB to run an efficient economy.

Why is there an objective price structure in a competitive market? Because as a result of the parametric function of prices, there is generally only *one* set of prices which satisfies the objective equilibrium condition, i.e., equalizes demand and supply of each commodity. The same objective price structure can be achieved in a socialist economy if the *parametric function of prices* is retained. On a competitive market the parametric function of prices results from the large number of competing individuals being too large to enable any one to influence prices by his own action. In a socialist economy, production and ownership of the productive resources outside of labor being centralized, the managers certainly can and do influence prices by their decisions. Therefore the parametric function of prices must be imposed on them by the Central Planning Board as an *accounting rule*. ... The condition that the quantity demanded and supplied has to be equal for each commodity serves to select the equilibrium price which alone assure the compatibility of all decisions taken. *Any price different from the equilibrium price would show at the end of the accounting period a surplus or shortage of the commodity in question.*

So, “at the end of the period” a surplus or shortage would indicate the difference from equilibrium, and then planners could adjust supply. However, there are some very serious problems with this proposal. Even if the state refrained from using prices to equalize wages, and even if Lange’s proposal for adjusting prices by trial and error were implemented with the greatest frequency possible, it would still be impossible to know the amount of the shortages. A shortage isn't a precise amount. But worse than that, they can be masked entirely or be phantom. Let's say that you could count the heads of those who had to do without. Yet, if demand exceeded supply, before supply could be adjusted customers *would substitute for the goods that were not available.*

If multiple shortages existed during the period and several kinds of substitutions were made of different products they would begin to affect each other. Shortages would show up where they wouldn't be except for the substitutions that have been made. The CPB might then make an array of incorrect adjustments to prices at the end of the accounting period and these in turn will affect the prices and output decisions of all related products in the next period. If the products are used as inputs then products made with the inputs will also be incorrectly priced. This snowballing effect will only get worse over time, until prices are essentially arbitrary.

Only a decentralized first-person response can tally every epsilon of change in market conditions. If the firm cannot respond with a change in price, the price will not reflect supply and demand conditions and this information will be lost. On the other hand, if the CPB responded right away by computer and always allowed the price to rise or fall as necessary with changes in supply and demand, then it would essentially be allowing firms

to maximize profit and it loses its role as planner. At that point, the CPB would really be a bystander just there to follow the changes in market conditions and report them, like a statistical agency.

The only other possible way to prevent snowballing would be for the CPB to learn of the shortage by computer and immediately increase *supply*. There would need to be a dynamic response to all shortages by either an increase in supply or an increase in price by the CPB in order to retain price information, but this would entail a direction of the planning board by the market rather than the other way around. The only authority left to the CPB would be a choice between changing supply or changing price, and of course reality would often make that choice – often an immediate increase or decrease in supply is impossible. Price changes are what make supply changes practical.

In addition the CPB would still need to track all of these changes and recalculate the equations for the whole economy for each decision – running the input-output system of equations to determine how this shift in supply or price is going to affect the rest of the system. If prices are to match supply and demand then a shift in supply – just like a shift in price – will have an effect on all products made with the given input. So for each decision by the CPB, all of the other production decisions need to be taken into account before the CPB can effectively decide between changing price and changing supply, and after the decision is made the calculations must be done all over again.

In the end, the CPB would just be mimicking the market, trying to make it a more perfect perfect competition. But it won't be perfect – it can't be perfect because it can't have all of the information of the individual firms – but perhaps more importantly, perfect competition isn't what makes markets great in the first place. With perfect competition you have low costs and low prices in a given moment – but you have no innovation, no creation, no dynamic change – you have just the static state that the static model represents.

Misunderstood

This misunderstanding by Lange – this emphasis on perfect competition rather than the actual dynamics of the market due to atomistic decentralization – highlights the errors of mainstream economics and the false idolization of planning and underestimation of the power of markets. Marx himself saw the incredible prosperity that markets brought, but he did not understand where it came from. Similarly, the conventional economic models have not yet captured the unexpected dynamic force of market coordination.

