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The pervasiveness and persistence of unemployment is, in my mind, the most telling "critical experiment" which should lead to the rejection of the basic competitive equilibrium model which (depending on how you view it) either predicts or assumes full employment. (19)

Although Adam Smith only used the term once in The Wealth of Nations, his image of the invisible hand has been perhaps the most influential idea in more than two centuries of discussion of economic theory and policy. Much of economics is an attempt to understand the conditions under which self-interested individuals are led "as if by an invisible hand" to pursue the interests of society. This essay argues that market imperfections, persistent unemployment, and failures of the invisible hand are the norm, and proposes that the standard results of welfare economics should be revised or reinterpreted to reflect this reality.

THE FRAMEWORK OF WELFARE ECONOMICS

Arrow and Debreu organized the theory derived from Adam Smith's insights into the two "fundamental theorems of welfare economics." The first theorem says that, under certain conditions, a competitive economy is always Pareto efficient. The second theorem states that every Pareto-efficient allocation can be achieved through the market system. Thus, government need only ensure the desired initial distribution of resources, perhaps through "lump-sum" transfers (i.e., taxes and payments unrelated to income, assets, or other economic variables); the market will take care of the rest. Limited government intervention is justified, in most versions of the theory, to address occasional market failures.

While these theorems have an abstract, logical importance, their empirical relevance and policy implications remain to be demonstrated. Smith was correct to say that the pursuit of individual interests may lead to unintended social consequences, but this does not imply that it leads to Pareto-efficient or socially desirable outcomes. The persistence and pervasiveness of unemployment should at least cast doubt on Smith's optimistic conclusions.

PROBLEMS WITH THE FIRST WELFARE THEOREM

Imperfect information and incomplete markets

If the standard competitive paradigm "proves" that persistent unemployment is impossible, which of its assumptions must be changed to make it consistent with reality? One of the most promising areas for revision is the assumption of perfect, costless information and complete markets in all present and future commodities. Recent research has shown that "in general, when risk markets are incomplete and information is imperfect, markets are not constrained Pareto-optimal:[1] the invisible hand does not work." [22] In such cases, carefully designed market interventions can make everyone better off. Of course, imperfect information and incomplete markets are ubiquitous. Therefore, the analysis of Arrow and Debreu, rather than proving the general applicability of Smith's conclusions, makes explicit the highly restrictive conditions under which the invisible hand theorem holds.

Technological change

Another common objection to the invisible hand theorem is that it assumes fixed or exogenously changing technology, an assumption that is clearly not relevant to modern industrial economies. This is closely related to the previous discussion, since technology is a special form of information, and technological expenditures give rise to economies of scale and sunk costs that lead to imperfect competition. Market competition often leads to innovation, but not necessarily to the optimal extent; depending on the assumptions made about the industry and market structure, it can be shown that competition may result in either too much or too little expenditure on research and development.

Human nature

Even though self-interest is an important aspect of economic behavior, human fallibility and sociability also play important roles. Human fallibility can be viewed as another aspect of imperfect information, not only because of incomplete access to information sources, but also because of differing, limited abilities to process and communicate the information that is available. Likewise, human sociability affects economic behavior. For example, individuals' perception of whether they are fairly treated, which is largely a social construct, affects their work effort, with important consequences for productivity and wage determination.

PROBLEMS WITH THE SECOND WELFARE THEOREM

Absence of lump-sum transfers

Government cannot and does not rely on lump-sum taxes and transfer payments for redistribution, because it does not have enough information to decide who should pay the taxes and who should receive the benefits. Taxes and transfer payments based on income, which are feasible and common in practice, introduce distortions in the ideal competitive equilibrium; once this happens, the separation of efficiency and distribution issues is no longer possible.

Principal-agent problems

In the Arrow-Debreu model, incentive problems do not arise: individuals perform according to the terms of a contract or they do not get paid. However, recent economic research has focused on principal-agent problems, in which the provision of appropriate incentives is a fundamental challenge. Incentive issues exist because the consequences of one's actions affect others; for example, a landlord benefits if his sharecroppers work harder. Economies where principal-agent problems arise are seldom Pareto-efficient; for example, a more egalitarian land tenure arrangement, allowing increased output, could easily be Pareto-superior to sharecropping. Again, it is impossible to separate issues related to distribution from those affecting efficiency.

ECONOMIC POLICY

A central assumption underlying standard welfare economics, and the policy recommendations that flow from it, is the existence of competition. Without competition, monopolists will produce too little and charge too much. However, a number of economists have suggested that all that is needed is potential competition, not actual competition, to ensure that the invisible hand enforces efficient prices and production levels.

In other research the author has shown that this view is not well founded; any level of sunk costs, even very small ones, can act as an effective barrier to entry. Profits may be driven down, but without any reduction in prices -- an industry's profits can be dissipated by excess entry and investment. The experience of the airline industry after deregulation showed that the potential for new entrants does not hold down prices for long; the incumbent firms matched the entrants' prices for long enough to force them to leave, then quickly restored much higher prices.

It is only under highly idealized circumstances that the market economy is constrained Pareto-efficient. Some of the inefficiencies of the market economy are small, and some -- like the periodic episodes of massive unemployment that have plagued capitalist economies during the past two centuries -- are not so small... Now that we see that market failures ... are pervasive, that they arise in all aspects of economic life, and that issues of efficiency and equity cannot be neatly separated, these issues of political economy cannot be ignored. But these issues -- and not the issue of whether the market economy attains the ideal of Pareto-efficiency -- are, or ought to be, the focus of debate and discussion in democratic societies. [37-38]

Notes

1. Constrained Pareto optimality is defined in the Jackson article summarized in this section.