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Is the "Invisible Hand" Still Relevant?

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The single most important proposition in economic theory, first stated by Adam Smith, is that competitive markets do a good job allocating resources. Vilfredo Pareto's later formulation was more precise than Smith's, and also highlighted the dependence of Smith's proposition on assumptions that may not be satisfied in the real world. The financial crisis has spurred a debate about the proper balance between markets and government and prompted some scholars to question whether the conditions assumed by Smith and Pareto are accurate for modern economies.

The single most important proposition in economic theory is that, by and large, competitive markets that are relatively, but generally not completely, free of government guidance do a better job allocating resources than occurs when governments play a dominant role. This proposition was first clearly formulated by Adam Smith in his classic *Wealth of Nations*. Except for some extreme supporters of free markets, today the preference for private markets is not an absolute. Almost everyone acknowledges that some functions, such as contract enforcement, cannot readily be delegated to market participants. The question is when and to what extent—not whether—private markets fail and therefore must be supplanted or regulated by government.

The answer to that question is something of a moving target, with views of the public and policymakers tending to ebb and flow. In much of the latter part of the 20th century, support for Smith's pro-private-market verdict gained favor, as reflected in the partial deregulation of financial and nonfinancial markets in the 1980s and subsequent decades. The financial and economic debacle of the past few years, however, has led many to revisit this question, particularly in Europe, but also in the United States and elsewhere. To many, financial markets in the last several years appeared dysfunctional to an extent that was never imagined possible earlier. Did Adam Smith get it wrong about private markets?

This *Economic Letter* discusses two versions of the argument in favor of private markets: that of Adam Smith in the 18th century and that formulated in the 19th century by the Italian sociologist and economist Vilfredo Pareto. The discussion in this *Letter* points to the key assumptions in the arguments. Differing views on the degree of applicability of those assumptions underlie a good deal of the debate over the appropriate balance between relying on markets versus government intervention. Also important are views on the effectiveness of government involvement.

Competitive markets work: Adam Smith

In 17th and 18th century England prior to Smith it was taken for granted that economic and political leadership came from the king, not from private citizens. If the king wanted to initiate some large economic project, such as expanding trade with the colonies, he would encourage formation of a company to conduct that project, such as the East India Company. The king would grant that company a monopoly, usually in exchange for payment. Smith thought that these monopoly grants were a bad idea, and that instead private companies should be free to compete. He called on the king to discharge himself from a duty "in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient; the duty of superintending the industry of private people, and of directing it toward the employments most suitable to the interests of the society." (Smith 1776 Book IV, Chapter 9)

Thus, Smith's conclusion was that private markets worked better if they were free from government supervision, and for him it was just about that simple. Smith's idea received its biggest challenge when the Soviet Union achieved world power status following World War II. In the 1960s, reported gross national product grew at much higher rates in the Soviet Union than in the United States or western Europe. Such authorities as the Central Intelligence Agency estimated that, before long, Soviet gross national product per capita would exceed that in the United States. To many, it looked as though centrally planned economies could achieve higher growth rates than market economies.

Economists who saw themselves as followers of Smith took issue. To them, it was simply not possible for centrally planned economies to achieve higher standards of living than market economies. As Smith put it, government could not be expected successfully to superintend the industry of private people. Too much information was required, and it was too difficult to structure the incentives. G. Warren Nutter, an economist at the University of Virginia, conducted a detailed study of the Soviet economy, arguing that the CIA's estimates of Soviet output were much too high (Nutter 1962). At the time, those findings were not taken seriously. But, by the 1980s, we knew that Nutter had been correct. If anything, the Soviet Union was falling further and further behind. By 1990, this process came to its logical conclusion: the Soviet empire disintegrated. Score a point for Adam Smith.

Competitive markets work: Vilfredo Pareto

By the 19th century, economists had largely abandoned the informal and literary style of Smith in favor of the more precise—if less engaging—style of today's economics. Increasingly, economists came to appreciate the role of formal mathematical model-building in enforcing logical consistency and clarity of exposition, although that development did not get into high gear until the 20th century. Under the leadership of Pareto and others, Adam Smith's argument in favor of private competitive markets underwent a major reformulation.

Pareto's version of the argument is usually taken to be a refinement of Smith's. But, for the present purpose, it's best to emphasize the differences rather than the similarities. First, Pareto provided a more precise definition than Smith of efficient resource allocation. An allocation is "Pareto efficient" if it is impossible to reallocate goods to make everyone better off. Or, to put it another way, you cannot make someone better off without making someone else worse off. This idea captures part of what we usually mean by "good performance," but not all of it. For example, attaining a reasonably equal income distribution is often taken to be part of what we mean by good performance, but an equal income distribution is not an implication of Pareto efficiency. Indeed, public policies designed to reduce the degree of income inequality can involve redistribution of income, making some better off and others worse off. (See Yellen 2006 for a discussion of income inequality.)

Pareto reached the remarkable conclusion that competitive markets generate Pareto-efficient allocations. In competitive markets, prices measure scarcity and desirability, so the profit motive leads market participants to make efficient use of productive resources. The English economist F.Y. Edgeworth made a similar argument at about the same time as Pareto. Economists Kenneth Arrow and Gérard Debreu presented precise formulations of the Pareto-Edgeworth result in the 1950s and 1960s.

A mathematical proof that competitive allocations are Pareto efficient required a characterization of a competitive economy that is more precise than anything Smith had provided. For Pareto, unlike Smith, it was not enough that the economy be free of government intervention. The essential characteristic for Pareto was that a buyer's payment and a seller's receipts from any transaction be in strict proportion to the quantity transacted. In other words, individuals cannot affect prices. This assumption is satisfied, to a close approximation, by the classical competitive markets, such as those for corn, wheat, and other agricultural commodities. The assumption rules out monopoly and monopsony, in which individual sellers and buyers are large enough to be able to manipulate prices by altering quantities supplied or demanded. When monopolists and monopsonists can distort prices in this way, allocations will not be Pareto efficient.

Pareto's efficiency result was first formulated in mathematical models of economies that were static and deterministic—that is, models in which time and uncertainty were not explicitly represented. In the 20th century, economists realized that the validity of the Pareto-efficiency result does not depend on these extreme restrictions. Arrow and Debreu showed that allocations will be Pareto efficient even in economies in which time and uncertainty are explicitly represented. They showed that, in any economy, there is an irreducible minimum level of risk that somebody has to bear. In a competitive economy with well-functioning financial markets, this risk will be borne by those who are most risk tolerant and who therefore require the least compensation in terms of higher expected return for bearing the risk. This is exactly as one would expect—risk-tolerant participants use financial markets to insure the risk averse. These aspects of equilibrium are discussed in standard texts on financial economics (such as LeRoy and Werner 2001).

However, demonstrating these results mathematically depends on assuming symmetric information—that is, assuming that everyone has unrestricted access to the same information. Such an assumption is less unrealistic than excluding uncertainty altogether, but it is still a strong restriction. The advent of game theory in recent decades has made it possible to relax the unattractive assumption of symmetric information. But Pareto efficiency often does not survive in settings that allow for asymmetric information. Based on mathematical economic theory, then, it appears that the argument that private markets produce good economic outcomes is open to serious question.

Nonmathematical economists such as Friedrich Hayek proposed an argument for the superiority of market systems that did not depend on Pareto efficiency. In fact, Hayek's argument was the exact opposite of that of Arrow and Debreu. For him, it was the existence of asymmetric information that provided the strongest rationale in favor of market-based economic systems. Hayek emphasized that prices incorporate valuable information about desirability and scarcity, and the profit motive induces producers and consumers to respond to this information by economizing on expensive goods. He expressed the view that economies in which prices are not used to communicate information—planned economies, such as that of the Soviet Union—could not possibly induce suppliers to produce efficiently. This is essentially the same as the argument against socialism discussed above.

Reevaluating the balance between markets and the government

The financial crisis that we have just experienced puts the question about the appropriate balance between reliance on markets and government intervention on center stage. Those who believe that unregulated markets generally work well express the view that misconceived interference by the government was the major cause of the crisis. In contrast, those who take a more critical view about the functioning of private markets believe that the crisis stemmed mainly from the destructive consequences of factors such as information asymmetries in financial markets and distortions to incentives that encouraged excessive risk-taking. The problem was not government involvement per se, but rather government's failure to place checks on destructive market practices.

This latter view dominates most of the recent proposals for financial reform. And, while the particulars of financial reform are still to be determined, it appears that current sentiment is less supportive of Adam Smith's verdict on the efficiency of markets than was the case prior to the financial crisis. At the same time, it seems clear that neither extreme view of the causes of the financial crisis is accurate. Reforms based only on one of these views to the exclusion of the other will not lead to a set of changes that will guarantee improvement of the performance of financial markets and prevent recurrence of financial crisis. The problems are complex, and sweeping changes in the regulatory structure could do more harm than good. A better strategy may be to identify specific problems in the financial system and introduce regulatory changes that address these clearly defined weaknesses, such as executive compensation practices that encourage excessive risk-taking.

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