

“ECONOMIC PLANNING AND THE KNOWLEDGE PROBLEM”: A COMMENT

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My comments are directed to issues raised by Professor Kirzner's analysis¹ rather than the various current proposals for a national industrial policy, but I hope that they may be relevant as a background for analyzing such proposals. And, since I shall be indicating my disagreement with some of the points made by Professor Kirzner, let me stress that I am in complete sympathy with his point of departure, namely, the emphasis on the *dispersion of information* among economic decision-making units (called by him, “Hayek's knowledge problem”) and the consequent problem of *transmission* of information among those units.

Much of my own research work since the 1950s has been focused on issues in welfare economics viewed from an informational perspective. The ideas of Hayek (whose classes at the London School of Economics I attended during the academic year 1938–39) have played a major role in influencing my thinking and have been so acknowledged. But my ideas have also been influenced by Oskar Lange (University of Chicago, 1940–42), as well as by Ludwig von Mises in whose Geneva seminar I took part during 1938–49.

By now there is a considerable literature in this area.² A careful perusal of this literature, I believe, would show that Professor Kirzner's opening statement (that “the Hayekian lesson was simply not grasped by subsequent welfare economists”)³ does not apply to present-day mainstream welfare economics, whether or not it applies to earlier work in this area.

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¹Kirzner (1984).

²An excellent presentation of many recent ideas is found in Reiter (1977).

³Kirzner (1984, p. 407).

Let me make clear at this point that I do not intend to argue the advantages or disadvantages of whatever may be meant by “central planning” or “industrial policy.” Rather, my purpose is to instill some skepticism with respect to oversimplified arguments sometimes used in this area. I shall argue that the paper before us—despite its many valuable insights—does not provide an adequate basis for forming a judgment concerning the respective merits of “the free market,” “central planning,” or other forms of government intervention in the economic process. (This is the Scottish verdict: neither “guilty,” nor “not guilty,” but “not proven.”) This is so for several reasons, including the ambiguity of the terms used, the implicit assumptions postulating a “classical economic environment” (to be defined below), problems of incentives, and value judgments transcending efficiency.

Terms such as “central planning” and “free market” have many interpretations. In analyzing the merits and weaknesses of the market process it is important to distinguish perfectly competitive markets from those that are monopolistic, oligopolistic, or otherwise imperfect. For example, in a decreasing cost industry only a few firms may survive even though there is freedom of entry. Such a market may be called “free,” but it is oligopolistic rather than perfectly competitive.

The well-known theorem of welfare economics asserts the Pareto-optimality (efficiency) of *perfectly competitive* equilibrium. But there is no theoretical basis for asserting that monopolistic or oligopolistic markets result in efficient resource allocation. Indeed, elementary analysis shows that uniform price monopoly or oligopoly is, in general, Pareto-inefficient.⁴ Moreover, under conditions of increasing returns, perfectly competitive equilibrium is, in general, impossible because profit maximization with parametrically treated prices would call for either a zero or infinite level of output. Therefore, it is difficult to see how one could justify, in the presence of increasing returns, the claim of efficiency of “free markets,” whether the latter term is interpreted as perfect competition or merely free entry.

Difficulties with increasing returns constitute but a special case of a more general problem. The theorem guaranteeing the optimality of perfectly competitive equilibrium assumes the absence of externalities, which also excludes public goods.⁵

⁴The so-called Coase Theorem, as I understand it, merely explores the implications of *postulating* that freely acting well-informed economic agents will arrive at a Pareto-optimal allocation. But uniform price monopoly or oligopoly does not satisfy this postulate.

⁵According to the usual definition of a public good, the utilization of its services by person A does not detract from the possibility of utilization by person B. Government or a private party may supply a public good.

Furthermore, as seen above, there are circumstances (such as increasing returns) where no set of prices can balance supply and demand; hence, perfectly competitive equilibrium is impossible. Thus, to guarantee both the possibility of existence of balancing prices—technically known as the *existence* of perfectly competitive equilibrium—and of the *optimality* of perfectly competitive equilibria, the relevant theorems make a series of assumptions, excluding such phenomena as externalities, public goods, increasing returns, indivisibilities, and so on. When all these assumptions (which rule out the “troublesome” phenomena) are satisfied, we speak of a *classical economy* or a *classical environment*. The theorems guaranteeing the possibility and optimality of perfectly competitive equilibria therefore presuppose a classical environment.

In practice, however, one often encounters nonclassical environments. Pollution is an example of an important negative externality while information derivable from new inventions or pleasure derivable from musical compositions illustrate positive externalities or public goods. National defense is another example of a vitally important public good. Bridges and dams exemplify indivisibilities, and there are many instances of economies of scale—known as “increasing returns (to scale).” I know of no basis for claiming that, in such situations, the free-market process (however defined) would yield optimal resource allocation.

It has been shown in a number of contributions (Mount and Reiter 1974; Osana 1978; Hurwicz 1977) that in classical environments the perfectly competitive price mechanism uses a minimal size message space; that is, it uses the minimum number of variables for transmitting information between economic units. This confirms Hayek’s view concerning the informational efficiency of the price mechanism. But it has been shown by examples (Hurwicz 1977; Calsamiglia 1977) that in the absence of convexity,⁶ it may be impossible to find any efficient decentralized mechanism using a finite-dimensional message space.

In addition to the difficulties in achieving efficiency in nonclassical environments, one must note that efficiency is only one of the possible criteria on which value judgments concerning economic systems are based. Some people may be prepared to sacrifice efficiency for the sake of egalitarian ideals; for them, the fact that the market process yields efficiency may be insufficient—even if one can assume a classical environment. Of course, this attitude need not lead to the

⁶Increasing returns are a special case of the nonconvexity of a production possibility set.

discarding of the market process, but perhaps to a supplementation with such devices as taxes or subsidies. Hence a case for some role of the government may be made on value judgment grounds even if it were admitted that government intervention results in lowering the efficiency of the system.

I also see another problem in relating Professor Kirzner's arguments to the above-quoted theorems concerning the optimality of competitive equilibria. The paper before us is emphatic in avoiding reliance on markets actually being *in equilibrium*. But it is only the position of competitive equilibrium which, under classical assumptions, is guaranteed to be optimal. So the best one can say for disequilibrium situations is that they may *tend to* an equilibrium. In fact, a study by Arrow, Block, and the present writer (1959) identified certain classes of situations where such a tendency toward equilibrium (that is, stability) is present. But subsequent research (for example, Scarf 1960) has shown that this tendency is not always present even in perfectly competitive markets. In any case, it is difficult to see how, in the absence of stabilizing forces, a *theoretical claim* can at all be made that markets produce efficiency.⁷

The paper's major emphasis is on what the author calls "the basic knowledge problem." To the extent that this goes beyond Hayek's dispersion of knowledge, this "basic knowledge problem" seems simply to be the fact that most decisions—whether by planners, firms, or individuals—must be made without complete and accurate information.⁸ There is no disagreement on this point. But some of the discussion seems to imply that such uncertainty makes any rational behavior *logically* impossible.

With that I cannot agree. There do exist well-developed theories of rational behavior under uncertainty, including the theory of search. Statistical decision theory is but one branch of this discipline. But even if one accepts the practical difficulties of *optimal* search behavior, one is then led to the framework of so-called bounded rationality (Simon 1972; Radner 1975).

I would, of course, agree that people often act on beliefs that are factually incorrect. At best, one can only hope for action that is rational in the light of foresight—not of hindsight. But this difficulty arises for everyone, not just for planners. True, if the planner's information

⁷I stress the term "theoretical" because neither Professor Kirzner nor I attempt to deal with the empirical evidence concerning the actual performance of different types of economic systems.

⁸See Kirzner (1984, p. 410): "[O]ur basic knowledge problem consists in an individual's simple ignorance of the circumstances relevant to his situation."

or beliefs are based on imperfect *transmission*, this does constitute an *additional* source of error. But that, again, is the Hayek problem!

As mentioned above, the market mechanism does minimize the required message space, but its claims are based on the assumption of classical environments.

In nonclassical environments or where values other than efficiency are important, a case may be made, at least, for the inadequacy of the “free market” process, and possibly in favor of a role for government intervention. But such a role should not be identified with central planning. In fact, this role may be confined to introducing and enforcing what may be called “rules of the game.” In particular, this may involve the creation of property rights through patents or copyrights. Creating such rights does amount to government intervention in the free market process but does not constitute what I would call central planning. Similarly, government’s role in enforcing income transfers through taxes and subsidies constitutes intervention but not central planning. The latter term should perhaps be reserved for the type of intervention that might be called *micro-targeting*—of which industrial policy or price controls and rationing may be examples, and in which the government makes decisions concerning outputs, inputs, or prices of specific commodities or groups of commodities. Even then it is important to distinguish between all-encompassing central planning (attempted in the Soviet Union) on the one hand, and elements of planning grafted onto an otherwise market-type economy (as is typical of Western countries) on the other. Thus one should recognize that between a *laissez-faire* economy and an all-inclusive central planning (micro-targeting) system, there is a spectrum of intermediate possibilities, some involving partial micro-targeting and some involving rules-of-the-game government intervention (with no element of planning or micro-targeting).

Personally, I tend to agree with Professor Kirzner that a large modern state is above optimal size as a micro-targeting unit. My reasons—in addition to those in the sphere of knowledge cited by Professor Kirzner—have to do with the discouragement of individual incentives⁹ toward efficiency, due to micro-targeting type planning as in the Soviet Union or China. But it does not follow that *laissez-faire* constitutes a universal panacea.

In particular, a proof has yet to be given that (as claimed on p. 417) “Competition between firms of different sizes and scope will tend . . . to reveal the optimal extent of such ‘central planning.’” In

⁹Professor Kirzner does recognize the role of incentives in the search for knowledge. I am referring here to incentives for efficient behavior *given the available knowledge*.

classical environments this might indeed be the case, but one is entitled to question whether, for instance, the present merger trends in the United States are logically bound to push the economy closer to optimality. If monopoly results, inefficiency might follow.

Let me also enter a dissent to the final statement in the paper—that the advocacy of industrial policy or central planning is necessarily rooted in the lack of awareness of the knowledge problem (“... their well-meaning advocates are totally unaware of the knowledge problem”).¹⁰ In my opinion, lack of appreciation of the importance of incentives may be a more serious problem. (China is an example of a centrally managed economy which has come to recognize the importance of incentives and the merits of decentralization.) Some advocates see industrial policy as a second-best solution in view of the imperfection of domestic and international markets and despite the difficulties due to the problem of knowledge. One may disagree with the judgment that this is indeed a second-best solution, but without imputing to its advocates lack of awareness of some of its disadvantages.

The problem of the appropriate role of markets and of government intervention is complex, and, in my view, panaceas are not to be found at either end of the spectrum. Dispassionate analysis—to which Professor Kirzner’s paper is a valuable contribution—shows the merits as well as the deficiencies of polar solutions; it points to the strengths of the market process as well as those imperfections which justify the search for supplementary institutional devices involving public intervention. It is likely that the answers will not please the ideologues of either persuasion.

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¹⁰Kirzner (1984, p. 417).

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THE INCENTIVE TO INNOVATE UNDER ALTERNATIVE PROPERTY RIGHTS

Steve Pejovich

Introduction

The idea of economic development dominates both the aspirations and the public policy of most countries today. However only capitalist countries have done something about it. The United States, Western Europe, Japan, Hong Kong, and a few other places are true islands of economic affluence in a world that is terribly poor. If overpopulation has created poverty in India, why are people in Hong Kong so much better off? If an inadequate resource base is responsible for poverty in China, why is a resource-poor country like Japan doing so well? The Soviet Union is well-endowed with resources but its leaders are having a rather hard time clothing, feeding, and housing their people. For centuries the Texas plains were among the most uninviting areas of the world; that is, until the incentive effects of a private property, capitalist economy transformed them into one of the most affluent regions on earth.

It is a myth to assert that the shortage of capital is holding back economic development in Eastern Europe, Africa, and Asia. Capital is a very mobile resource which is continuously and untiringly looking for higher yield opportunities. The flow of capital from the North to the South and from the West to the East has not been sufficient to equalize marginal yields, because of political instabilities, currency controls, and/or attenuated property rights in noncapitalist countries. Also, governments of many countries have either inflated their respective economies, or overtaxed their people, or mortgaged their country's resources to foreign creditors, and all of that in the name of economic growth. High growth rates, however, are political

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