AGRICULTURAL POLICY ANALYSIS : PROBLEMS AND OPPORTUNITIES[1]

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1. Introduction

The focus of the 1990 AEASA Annual Conference was efficiency in agriculture. This paper discusses problems that arise in the identification and measurement of economic efficiency as it pertains to agricultural policy analysis. The following questions are considered:

i) What is the role of economics in public policy analysis?

ii) What is the relevance of the "economic calculation debate" (ECD) in achieving a productive economy?

iii) How do information problems limit the usefulness of marginal efficiency conditions for public policy purposes?

iv) What are the implications of the subjectivity of costs and benefits in measuring economic efficiency?

v) Is there an alternative to the cost-benefit approach in public policy analysis?

vii) What are the implications of the analysis of this paper for the work agenda of agricultural economists?

2. Role of economic theory in agricultural policy analysis

It is appropriate to begin any public policy course with a discussion of alternative ways of achieving social co-operation. There are five basic economic functions that must be performed in any society. There must be some means of determining what to produce, how to produce, how to distribute income, how to retain goods and services, and how to provide for economic progress (Knight, 1933). Consideration of these tasks leads into a discussion of alternative ways of organising economic activity.

Knight (1933) discusses four possible forms of economic organisation, but the only two methods possible in a modern society are the market system and central direction (or socialism). Any discussion of the relative merits of these two methods of coordinating economic activity leads to consideration of the ECD that raged during the 1920s and 1930s. The economic issues in the ECD, although widely neglected, are both timely and highly significant in evaluating farm policies, especially collectivist agricultural production and marketing systems throughout the world.

2.1 The economic calculation debate

Austrian economist, Ludwig von Mises launched the calculation debate in 1920 by contending that socialism was incompatible with rational economic planning (Mises, 1935). Mises was responding to various socialist proposals of the early 1900s to replace markets with central planning as the means of resource allocation in production planning. He argued that in the absence of market prices there is no possibility of calculating costs or revenues and no way of determining whether the most highly valued products have been produced. In support of Mises, fellow Austrian F.A. Hayek (1948) demonstrated that the structure of production in a centrally directed system cannot reflect consumer wants efficiently because the knowledge necessary for economic calculation cannot be coordinated and transmitted in the absence of market prices.

The views of Hayek and Mises were slightly different as to the feasibility of central planning. Mises contended that rational planning under central direction is impossible, while Hayek stressed that the question at issue concerns the possibility of successful planning. That is, Hayek stressed that the private property system is successful in the sense that markets bring about the discovery, co-ordination and transmission of information to market participants more fully than can any other known system of economic co-ordination.

Hayek and Mises convinced socialist theorists of the importance of price signals in economic planning but not that the market system is essential. Indeed, the ECD led to attempts by central planning proponents to duplicate the benefits of markets through "market socialism"[2]. Oskar Lange, the best known central planning theorist involved in the ECD, demonstrated that if given crucial data on available resources, production possibilities, and consumer preferences, a central planning board could simulate market prices and allocate resources efficiently (Lange and Taylor, 1938). This so-called market socialism approach was widely considered to be the definitive answer to the Mises-Hayek challenge of central planning[3].

However, market socialism, as Hayek demonstrated, does not come to grips with the crucial issues in collectivist planning. Hayek (1948) published a series of papers in the 1930s and 1940s, including his economic classic. "The Use of Knowledge in Society", which demonstrated that market socialism is not logically contradictory but is practically impossible because of information problems. That is, he proved that the market socialism approach is not operational because the necessary data cannot be obtained by a central planning board. Since economic information is subjective (as shown below) and constantly changing, it cannot be conveyed as objective data for use by central planners.

What was the outcome of the ECD? There is an emerging consensus that central planning has failed - as evidenced by results from the Soviet Union, Eastern Europe, and many other countries around the world since World War II. This result reflects the fact that the structure of production cannot efficiently adapt to people's wants in the absence of decentralised market prices and the information and incentives that prices convey (Wagner, 1989:208). Hayek's insights concerning the unique role of market forces in discovering, coordinating, and transmitting information, long widely neglected, are gradually receiving more attention in mainstream neoclassical theory.

2.2 Implications of Hayek's insights for public policy analysis

The information problems identified by Hayek also limit the use of the marginal efficiency conditions (MEC) of economic theory for public policy purposes. The MEC are "that the marginal rates of substitution between any two commodities or factors must be the same in all their different uses" (Hayek, 1948:77). It is shown in welfare economics that these conditions are achieved when individuals and firms optimise under "perfect competition" (Hirshleifer, 1988:467-468).

The MEC are useful to the decision maker in agriculture in what Buchanan (1979:41) refers to as "logic of choice". If a farmer understands the efficiency conditions for input use, for example, he will weigh alternatives more carefully and search more diligently for alternatives. These efficiency conditions have proven useful in a wide variety of applications. Common examples in agricultural economics include the analysis of the most profitable amount of nitrogen to use in maize production and the least cost combination of grain and hay in producing milk. In these and many other situations, knowledge of the MEC by the decision maker may produce "better" choices as evaluated by his own standards.

As Hayek (1948:77) emphasises, however, the MEC are not the solution to the economic problem facing society. The economic problem is to secure the best use of resources known to the various members of society for ends whose relative importance is only known by them (Hayek, 1948:78). That is, it is a problem of how best to utilise knowledge that is not fully given to anyone.

The data necessary to apply the efficiency conditions in policy applications cannot be obtained for reasons Hayek emphasises - economic data are highly specific to time and place and are constantly changing. When the planner is considered to have been given the information necessary for economic planning, as in "market socialism", the economic problem is assumed away. The conclusion is that information problems are the Archilles Heel of central planning, whether the issue is land use planning, planning of agricultural production, or economic planning affecting all sectors. Information problems also pose insurmountable problems in public policy analysis.

3. Criteria in public policy analysis

Efficiency and equity are the most widely discussed criteria in public policy analysis.

3.1 Economic Efficiency

Economic efficiency is easy to define but difficult (or impossible) to measure (Pasour, 1990). It is a measure of useful output in relation to the value of inputs used. Thus, efficiency of any activity varies with changes in valuations of inputs or outputs. Consequently, efficiency is subjective because the values of the inputs and outputs are those of the decision maker (Pasour, 1981a, 1981b). Consider the example of whether it is more efficient for an individual to ride a bicycle or drive a car to work. The answer hinges on the values placed by the decision maker on the inputs and outputs in each case. Consequently, it may be efficient for Professor Jones to ride his bicycle and for Professor Smith to drive his car, although Smith and Jones live in adjacent houses and work in the same building. This example illustrates the importance of recognising the subjective character of economic data in policy analysis[4].

Buchanan (1969) emphasises that opportunity cost is subjective. The cost of any action is the value of the sacrificed alternative. However, the alternative forgone is never actually experienced and its value exists only in the mind of the decision maker. The fact that costs and benefits are subjective means that the outside observer cannot identify real world examples of economic efficiency. That is, the observing economist is unable to "read" utility functions (Buchanan, 1987:5). Consequently, efficiency measurements must be based on some norm or standard and the norm typically used is "perfect competition". If perfect competition is the norm, however, the outcome is predestined - all economic activity will be considered inefficient because no real world market will ever measure up to the ideal of perfect competition. The conclusion is that economic efficiency is meaningful in a logic of choice to the individual decision maker but is not useful as a touchstone of public policy because utility is measurable only to the individual. Moreover, problems posed by the subjective nature of utility arise in consideration of equity - how the economic pie is divided.

3.2 Equity[5]

How does one determine whether a public policy is beneficial or harmful? Economists long have searched for an objective procedure for making policy recommendations. Possible approaches include the Pareto criterion, the compensation principle, the social welfare function (SWF), and cost-benefit (CB) analysis.

3.2.1 The Pareto Criterion

The most widely accepted criterion for making welfare judgments is the Pareto criterion, which holds that a change is beneficial if it benefits at least one person without reducing the welfare of anyone. In Figure 1, the utilities of individuals 1 and 2 are measured along the vertical and horizontal axes, respectively.

If the initial situation is point A, points B, C, or D would represent "Pareto better" moves because one person is made better off while the other is no worse off[6].

How about a move from A to E in Figure 1? In this case, the Pareto criterion does not provide an answer because individual 2 is harmed by the move in which individual 1 gains. All important public policies in agriculture (and in other sectors) are similar to the move from A to E in that they benefit some people while disadvantaging others. An agricultural price support programme, for example, benefits farmers at the expense of consumers and taxpayers. Therefore, the Pareto criterion provides little help in public policy analysis.

A number of theorists have attempted to devise a criterion for evaluating public policies that benefit some people at the expense of others. One widely discussed proposal is the compensation principle.

3.2.2 Compensation principle

The compensation principle holds that a policy is an improvement if those who gain evaluate their gains at a figure higher than the value which the losers place upon their losses. Consider again the move from A to E in Figure 1. If the benefit to individual 1 exceeds the harm to individual 2, the compensation principle says that the move from A to E improves welfare, since the first person could compensate the second and keep some of the gain. The compensation principle does not require that individual 2 actually be compensated.

However, the seemingly plausible compensation principle is based on an unacceptable implicit value judgment (Baumol, 1977:530). It involves a concealed interpersonal comparison. Even if individual 1 values his gain higher than individual 2 values his loss, it does not follow that there is a net gain in moving from point A to point E. The compensation principle implicitly assumes that a rand is worth the same to each individual.

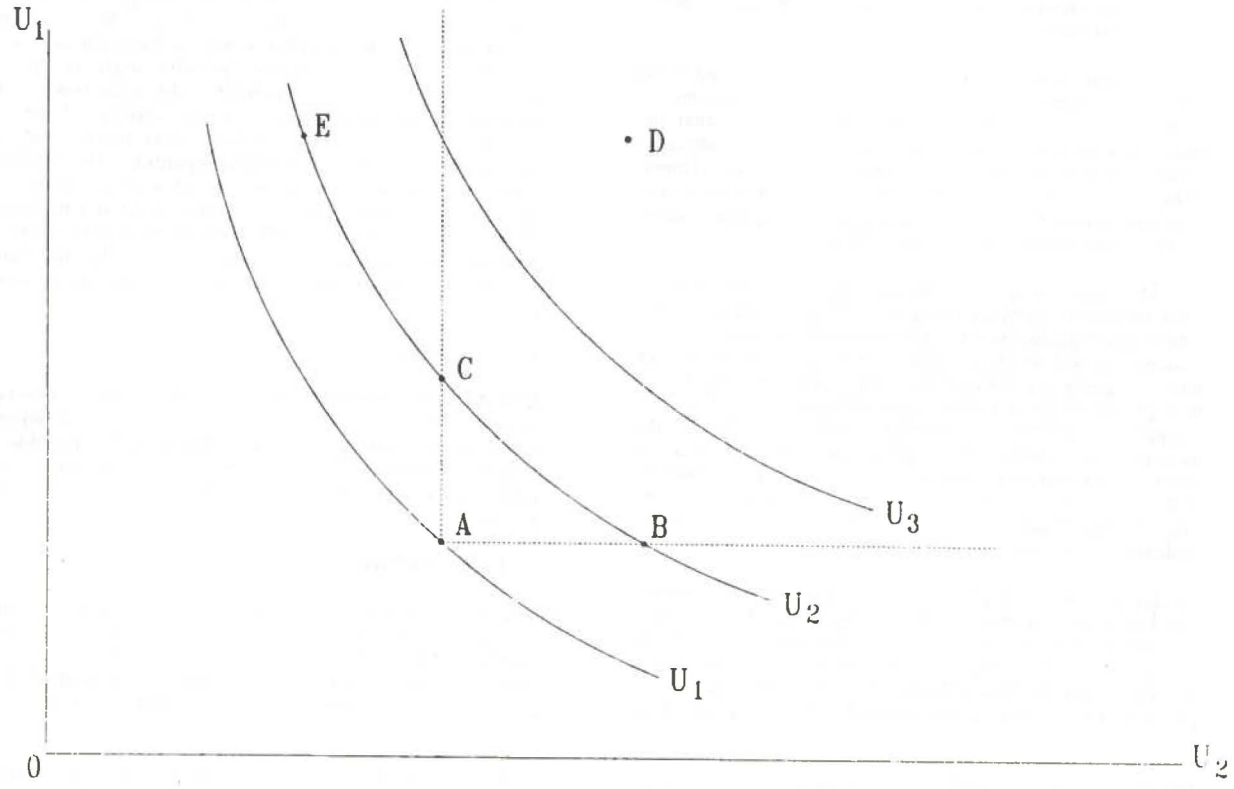

Figure 1: Criteria for making welfare judgements - the Pareto Criterion, compensation principle, and "social welfare function".

However, the values of the gains and losses are not comparable and there is no legitimate way to make such interpersonal comparisons of utility. Consequently, unless compensation is actually made, the Pareto criterion is violated by public policies that benefit some people at the expense of others. Although the compensation principle is often used in welfare analyses of tariffs, price supports, and other government restrictions on competition, any such analyses inevitably involve invalid interpersonal utility comparisons.

3.2.3 Social welfare function

The "social welfare function" (SWF) is another approach devised to analyse the welfare effects of policies that harm some people while benefiting others. A social welfare function can be visualised as an indifference map ranking different combinations of utility to different members of society (Baumol, 1977:530). The line U_1, in Figure 1 represents one such level of no help in the evaluation of public policies. If such information were available, then the move from A to E in Figure 1 would improve welfare because E is on a higher indifference curve of the social welfare function. The SWF is a good example of what Professor Coase (1988:29-30) refers to as "blackboard economics".

"Economic policy involves a choice among alternative social institutions, and these are treated by law or dependent upon it. The majority of economists do not see the problem in this way. They paint a picture of an ideal economic system, and then comparing it with what they observe (or think they observe), they prescribe what is necessary to reach this ideal state without much consideration for how this could be done. The analysis is carried out with great ingenuity but it floats in the air. It is ... "blackboard economics". There is little investigation of how the economy actually operates, and in consequence it is hardly surprising that we find, as with Pigou, that the factual examples given are often quite misleading" (Coarse, 1988:28-29).

The conclusion is that a SWF is easy to draw on a blackboard but of no practical use in public policy analysis because there is no way to obtain the necessary information.

3.2.4 Cost-Benefit Analysis

The problems inherent in meaningfully defining and measuring efficiency and equity are often submerged in cost-benefit analyses based on measurements of consumer surplus and producer surplus (Hirshleifer, 1988:204-205). These measurements implicitly involve the use of the compensation principle.

Consider the welfare effect of a production control in agriculture that increases price from P_0 to P_1 by decreasing output from Q_0 to Q_1 (Figure 2). Area A is said to be a "transfer" from consumers to producers and the triangle B a "welfare cost" or "deadweight loss" of the amount by which the value of lost output (area under demand curve) exceeds the value of resources saved (area under supply curve).

These measurements based on market supply and demand curves inevitably involve interpersonal utility comparisons. It is assumed that a rand is a rand regardless of whether it is received or given up by consumers or producers (and regardless of which individuals are affected). Consequently, the measurement of areas A and B is subject to the same interpersonal utility measurement problems as those discussed above in connection with the compensation principle. That is, any such measurement of costs and benefits must involve interpersonal comparisons that, "to put it mildly, would be highly conjectural" (Robbins, 1981:8). Similar problems arise in measuring the welfare effects of import controls, subsidised credit, and other restrictions on competition in agriculture.

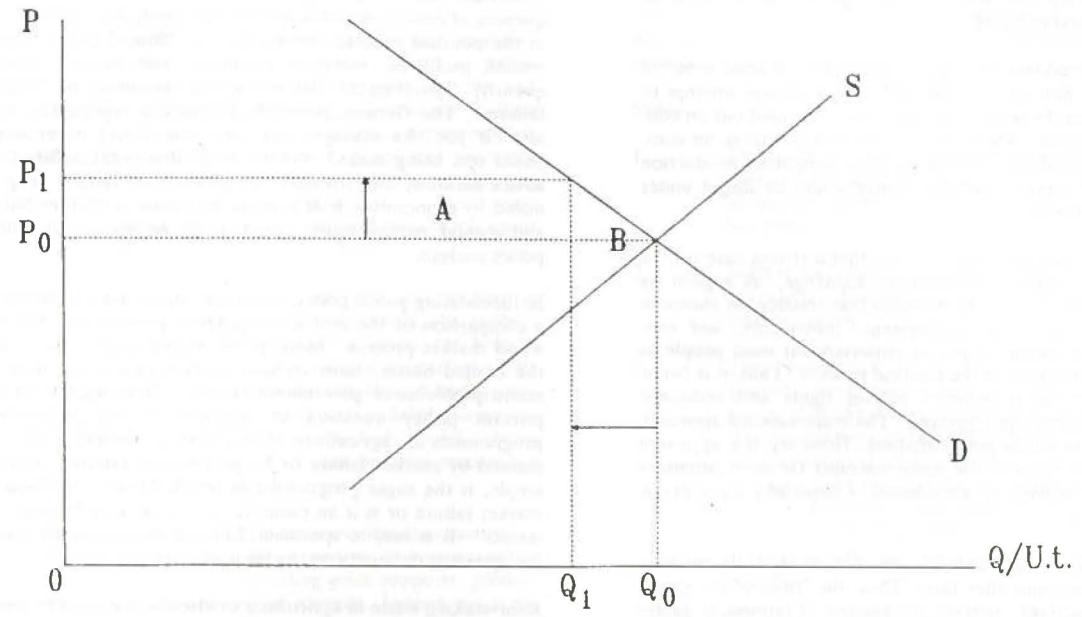

Figure 2: The welfare effects of a price support implemented by production control

There is no legitimate way, as Hayek (1979:201-202) emphasises, to measure and compare the benefits afforded to or the costs endured by different groups of people - because costs and benefits are subjective.

"Any attempt to construct a rigorous and universally applicable criterion for distinguishing what policy change is an economic improvement must founder on the problem of interpersonal comparisons. Where a policy change affects some persons favourably and others adversely, as is usually the case, there is no *a priori* way of weighing the net results" (Baumol, 1977:526).

The conclusion is that all policy recommendations involve value judgments. For example, there is no value-free procedure to justify the repeal of sugar production quotas in terms of gain of utility of consumers at the expense of producers by measuring producer surplus and consumer surplus.

What is the alternative to the CB approach in analyzing the effects of government restrictions on competition in agriculture, or in other areas? Any defensible criterion must take into account the general utility of markets, and the fact that there is no principled philosophic difference between economic freedom and individual freedoms of other types (Bork, 1984:228).

Professor Coase (1974) shows that prohibitions on mutually beneficial exchange are not fundamentally different from restrictions on what are referred to as First Amendment Rights in the United States - freedom of speech, freedom of the press, freedom of assembly, and so on. Yet economic regulation is generally accepted by the public, even in North America and Western Europe, while there is a strong predisposition against government restrictions of speech, the press, and other "human rights."

What are the implications in policy analysis of not recognizing that costs and benefits are inherently subjective? Economic freedom frequently is an early casualty in the evaluation of public policies utilizing CB measurements. Moreover, CB analyses may implicitly support restrictions on economic freedom - or be used to justify government intervention.

Consider the measurement of deadweight losses associated with production quotas, import controls, and other restrictions on competition in agriculture. If the welfare costs based on CS and PS measurements are small, it is concluded that the economic distortion is small. However, this approach ignores or discounts the fact that there is no fundamental difference between economic rights and First Amendment rights. A tobacco or sugar cartel by its very nature is an infringement on economic freedom and this conclusion remains valid even when such protectionist programmes are instituted following a plebiscite by affected producers. That is, the fact that an infringement of civil rights results from majority rule does not eliminate the "human rights" or ethical issue involved. Government-run agricultural cartels inevitably restrict economic freedom - in the words of Harvard philosopher Robert Nozick, they restrict "capitalist acts between consenting adults."

Economists making cost benefit studies of price supports, production controls, and so on, generally fail to take into account the fact that government-operated cartels infringe on individual rights. These same economists would consider it inappropriate to use the CB approach to measure the effects of government restrictions on freedom of speech, freedom of the press, freedom of movement, and so on. The use of CB analyses to analyze various cartellization schemes both discounts the importance of economic freedom and ignores the fact that costs and benefits affecting different people are not comparable. Thus, there is ample evidence in support of Hayek's conclusion that the attempt by economists to determine public policy by measuring costs and benefits involves interpersonal comparisons and "lacks all scientific foundation" (Hayek, 1979b:201).

3.2.5. Constitutional approach

Nobel Laureate James Buchanan, as an alternative to CB analysis, proposes that appropriate government policies be determined at the constitutional level. The First Amendment to the U.S. Constitution adopts the general principle that "Congress shall make no law...abridging the freedom of speech." The Friedmans (1980) propose an equivalent "Economic Bill of Rights" to limit government power in the

economic and social area. This amendment would ensure that federal, state, or local governments do not infringe on the right of people to buy and sell legitimate goods and services on mutually acceptable terms.

If economic freedoms were legally protected, at least some of the objectives that narrowly focused interest groups attempt to achieve through the political process could be ruled out on constitutional grounds. Many of the current restrictions on competition in agriculture, including price supports, production controls, and import controls, clearly would be illegal under such an amendment.

The constitutional approach assumes that a strong case can be made for free trade and voluntary exchange, as argued by professor Coase (1974). He contends that freedom of choice in making decisions about employment, investment, and consumption opportunities is just as important for most people as freedom to participate in the political process. Thus, it is ironic that the relationship between human rights and economic freedom has been largely ignored. The constitutional approach is no panacea in public policy analysis. However, this approach focusing on the rules of the game warrants far more attention than it has received by economists - especially agricultural economists.

The constitutional approach assumes that individuals optimize within the constraints they face. Thus, the "rules of the game" are highly important. Indeed, the analogy of fairness in games of sport is helpful in considering equity questions in the economic sphere. How does one determine, for example, whether the outcome of a rugby game is fair? The question of fairness is determined not by the outcome of the game but rather by whether the rules were obeyed. The fact that a rugby team perennially defeats most of its opponents does not suggest that the game is unfair.

Similarly, a strong case can be made that justice or fairness in the economic area should not be judged on the basis of economic outcomes. Wages and prices in decentralized competitive markets are "just" in the same sense that outcomes of sports games are fair. Indeed, Nozick's entitlement theory is consistent with this rules-based approach to equity problems (Nozick, 1974). The entitlement theory holds that given the initial position, a person's income is just, provided that the rules were followed in its acquisition. For example, a rugby player's income of 5 million rand per year is just if acquired through a process of voluntary sale of service[7]. However, in considerations of whether the "economic game" is fair, quite often the focus is on outcome rather than rules. That is, unequal incomes are often taken as evidence that the economic system is unfair. The implication is that in discussions of equity, additional emphasis should be placed on the rules of the game, on the constitution, rather than on the economic outcomes. In considering the bedrock constitutional issues, the question of the appropriate role of government inevitably arises.

4. Market failure versus government failure.

An important public policy problem in any society is to determine which activities should be private and which should be public. To make this public policy decision intelligently, it is necessary to have information about both the private choice and collective choice decision-making frameworks. Conventional neoclassical economic theory focuses on private choice. Similarly, public choice theory involves the use of economic principles to explain the decisions of the various participants in the political process - including voters, politicians, and bureaucrats.

Using the norm of perfect competition, economists have identified numerous cases of "market" failure, including public goods, externalities and free riders, income distribution, monopoly, market instability, and so on (Pasour, 1990). However, public choice theorists have demonstrated that collective choice is no panacea because problems analogous to those of market failure are endemic in the political process. Undesirable consequences of collective action include monopoly and rent seeking in the political process, externalities or "forced riders," information problems, incentive problems, and so on. Consequently, "government failure" is the analogue of "market failure." The German politician Bismark is reported to have said "If you like sausages and laws you should never watch either one being made." Public choice theory takes Bismark's advice seriously and stresses that government failure, long ignored by economists, is at least as pervasive as market failure and should receive equal attention by economists in public policy analysis.

In formulating public policy, a realistic choice must be based on a comparison of the real world political process with the real world market process. Many public policy studies, at least in the United States, have stressed market failure but have ignored problems of government failure. This suggests an important policy question in agriculture: are government programmes in agriculture throughout the world better explained by market failure or by government failure? For example, is the sugar programme in South Africa a response to market failure or is it an example of rent seeking by sugar interests? It is easy to speculate, but it is impossible to answer this question definitely on the basis of economic theory.

Rent-seeking waste in agriculture or elsewhere cannot be determined independently of one's view of the appropriate role of the state (Pasour, 1987). Economic rent is a return in excess of opportunity cost, but opportunity cost is subjective. Thus, economic rent is a subjective concept appropriately defined by Wiseman as "an area under a state of mind" (Crew and Rowley, 1988:56). Consequently, whether the sugar programme is rooted in market failure or government failure is not a question that can be answered through CB analysis for the reasons cited earlier. Consumer surplus and producer surplus involve magnitudes that cannot be added or weighted. Consequently, if utilities are not comparable, it cannot be proven that the abolition of a production quota, or other market distortion, will increase social utility. In short, there is no objective CB procedure for determining which activities of the government are illegitimate, or for determining the extent of rent-seeking waste associated with legitimate activities.

5. Implications for agricultural policy analysis

In analyzing the effects of alternative institutional arrangements, it is important both to understand the collective choice process and to know how markets work. In evaluating policy alternatives, real world markets must be compared with the real world political process - not with an idealized policy. When collective choice is substituted for private choice, information and incentive problems inevitably arise. Modifications of conventional neoclassical economic theory to take these problems explicitly into account will increase its usefulness and relevance for public policy analysis. First, a recognition of information problems inherent in the political process suggests an increased emphasis on the operation of the entrepreneurial market process as emphasized in neo-Austrian economics (Kirzner, 1973). Second, incentive problems endemic in the political process, largely ignored by neoclassical policy analysts, imply a greatly expanded role for public choice theory.

The challenge in agriculture, as in other areas, is to develop political institutions capable of bringing the self interest of politicians, bureaucrats, and voters into harmony with the general welfare of society (Gwartney and Wagner, 1988:25). In achieving this objective, it is much more important to have rightly constructed institutions to channel self interest in valuable directions than it is to elect "better" people to political of-

fice (Buchanan, 1989). The economist can make an important contribution to public policy by analyzing the effects of alternative constitutional constraints.

What are the implications for agricultural policy analysis? Agricultural economists should devote more effort to public choice theory and the entrepreneurial market process and spend more time on the limitations of conventional welfare economics in public policy analysis. Unless a background is firmly established as to how markets and political processes operate, it is easy for the policy analyst to become an apologist for rent-seeking programmes in agriculture. More time devoted to political economy, broadly defined, means less spent on optimization techniques (Buchanan, 1979).

Economic theory certainly has an important role to play in public policy analysis. First, public choice theory, the application of economic principles in the political arena, can help us understand actions in the political process as they affect public policy (Pasour, 1990). For example, the idea of highly concentrated benefits and widely diffused costs is helpful in understanding government farm policies. Similarly, public choice theory is helpful in understanding why the political process has a short-run bias (Aranson, 1981).

Second, economic theory can help trace out the direct as well as the indirect and unintended consequences of various public policies affecting agriculture, including price supports, production quotas, land taxes, and import controls. Indeed, this is the area that traditionally has received most emphasis by policy analysts in agricultural economics. And the importance of work in these areas should not be discounted. However, the implication of the preceding analysis that many agricultural policy studies are too narrow in scope - focusing too much on the short-run effects of policies as they affect the farm sector. As shown above, economic efficiency cannot be used to determine which public policies are best on the basis of an evaluation of outcomes. Instead, efficiency to be meaningful must deal with the process through which policies are developed. That is, efficiency must be concerned with the extent to which public policies are responsive to the values and choices of individual citizens (Wiseman, 1989:273).

What should the policy analyst do? Yeager's admonition is just as appropriate and timely for agricultural economists as it is for all other policy specialists: "We should appraise each proposed intervention, as best we can, for its likely legal, political, social, and ethical repercussions - for its repercussions on the system as a whole" (Yeager, 1976:569). Buchanan's advice to policy analysts also proposes a much broader focus than that characterizing most work in agricultural economics: "Economists should concentrate attention on the institutions, the relationships, among individuals as they participate in voluntary organized activity in trade or exchange broadly defined" (Buchanan, 1979:36).

The proposed approach suggests that the purported merits of a specific farm programme, narrowly assessed, are not the only relevant consideration - that the overall effects of the policy must be taken into account. This presents a formidable challenge for the education and training of policy analysts as emphasized by a number of leading economists. For example, J.S. Mill concluded that "A man is not likely to be a good economist if he is nothing else" (Hirsh and de Marchi, 1990). This sentiment was echoed by Hayek (1967:123): "But nobody can be a great economist who is only an economist - and I am even tempted to add that the economist who is only an economist is likely to become a nuisance if not a positive danger." A prime example of harmful policy analysis is that which rules out policies that do not correspond to some unattainable ideal.

Economic policy involves a choice among alternative institutional arrangements. But merely adopting a comparative institutions approach is not enough: "...without some knowledge of what would be achieved under alternative institutional arrangements, it is impossible to choose sensibly among them" (Coase, 1988:30). The development of a theoretical system that can be used to analyze the effects of various institutional alternatives presents both a challenge and an opportunity in agricultural policy analysis[8].

Notes

1. This paper is an expanded version of a workshop presentation at the conference of the Agricultural Economics Association of Southern Africa, September 1990.

2. Market socialism is a good example of an economic oxymoron. A socialist system, by definition, is not a market system.

3. The implications of the Mises-Hayek analysis apparently were not recognized, even at Chicago. Reder (1982:4) makes the following statement about the appointment of Oskar Lange during the 1930s in the Department of Economics at the University of Chicago. "His work on the use of the price system to allocate resources in a socialistic economy was widely considered to be a definite answer to the Mises-Hayek attack on the economic efficiency of socialism".

4. Hayek stresses the importance of subjectivism in economic theory. "And it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism" (Hayek, 1979a:52).

5. The following discussion is adapted from Pasour (1990).

6. A move from A to D benefits both parties.

7. A practical problem is attaining a correct initial position. For example, the rugby player might have cheated or stolen to acquire the skills that yielded the unusually high income. If so, the player is not "entitled" to the high income.

8. "To do this it is not necessary to abandon standard economic theory, but it does mean incorporating transaction costs into the analysis, since so much that happens in the economic system is designed either to reduce transaction costs or to make possible what their existence prevents" (Coase, 1988:30).

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