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AGRICULTURAL POLICY ANAL TUNITIES[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 ab-

2.2 Implications of Hayek's insights for public polic analysis

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

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

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

The data necessary to apply the efficiency conditions in polic applications cannot be obtained for reasons Hayek emphasise - economic data are highly specific to time and place and ar constantly changing. When the planner is considered to hav been given the information necessary for economic planning, a in "market socialism", the economic problem is assumed awa The conclusion is that information problems are the Archille Heel of central planning, whether the issue is land use plar ning, planning of agricultural production, or economic plannir affecting all sectors. Information problems also pose insu mountable problems in public policy analysis.

3. Criteria in public policy analysis

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

3.1 Economic Efficiency

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

Buchanan (1969) emphasises that opportunity cost is subje tive. The cost of any action is the value of the sacrificed alte native. However, the alternative forgone is never actually e perienced and its value exists only in the mind of the decisic maker. The fact that costs and benefits are subjective mea

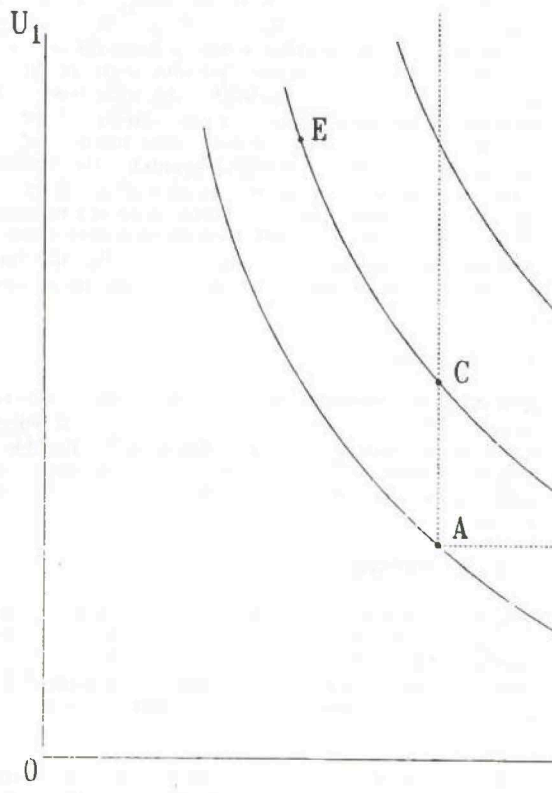

Figure 1: Criteria for making welfare judgements - the

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

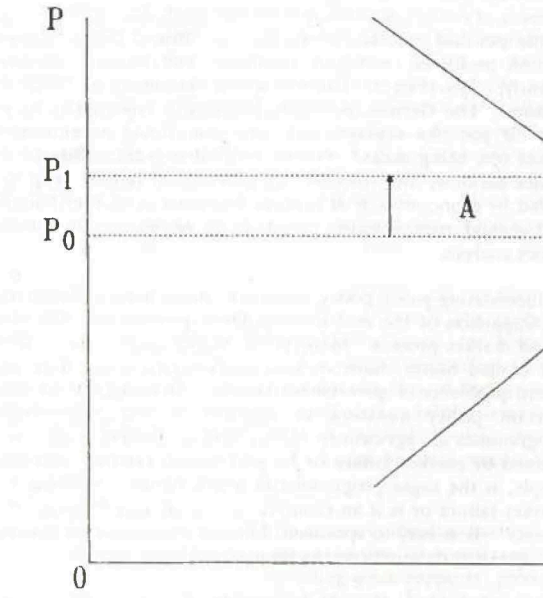

Figure 2: The welfare effects of a price support imple

There is no legitimate way, as Hayek (1979:201-202) em-phasises, 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 ef-fects of government restrictions on competition in agriculture or in other areas? Any defensible criterion must take into ac-count 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.

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,

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

What are the implications for agricultural policy analysis? Agricultural economists should devote more effort to publi 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 applica tion of economic principles in the political arena, can help u understand actions in the political process as they affect publi policy (Pasour, 1990). For example, the idea of highly con centrated benefits and widely diffused costs is helpful in under standing government farm policies. Similarly, public choic theory is helpful in understanding why the political process ha a short-run bias (Aranson, 1981).

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

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

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

Economic policy involves a choice among alternative inst tional arrangements. But merely adopting a comparative stitutions approach is not enough: "...without some knowle

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