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MARKET INFORMATION AND PRICE REPORTING IN THE FOOD AND AGRICULTURAL SECTOR

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MARKET INFORMATION: SOME RESEARCH ISSUES

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INTRODUCTION

A number of research issues concerning market information and price reporting in the agricultural and food industries can be lifted out of the preceding discussions.

The most striking set of research questions address the theoretical and actual linkages between market information and economic performance. In essence, how does the availability, accuracy, and comprehensiveness of market information impact upon the coordination processes between economically interdependent activities, allocative efficiency, technical efficiency, and equity in the distribution of economic returns among participants in interdependent economic activity?

This set of issues has both theoretical and empirical aspects. First, I consider some theoretical concerns. When we discuss the topic of market information, as contrasted with other types of information (in particular, management information), we implicitly assume that allocative decisions are made by negotiated exchange in some type of a marketing system. By definition, we exclude allocative decisions made by fiat in an administered system, since, in such a system, allocative decisions are not made in a market. Thus, market information does not exist and the concept of market information has no relevancy.

In much of agriculture and elsewhere in the food system, it is easily observed that negotiated exchange is declining, often rather rapidly, as a means of making allocative decisions. This is accompanied by an increase in the use of administered or at least quasi-administered systems of exchange, such as vertical integration, cooperative integration, contract integration, or other types of private agreement.

Administered exchange is not characterized by the same basic conditions that are assumed in the generally received economic theory of market transactions. For example, the assumption of resource mobility appears of questionable validity in administered systems. Resource movement is often limited to enterprises under control of a single administrative authority (such as a conglomerate firm). Likewise, the assumed lack of buyer and/or seller concentration appears invalidated where trade channels are limited to those fixed by administrative fiat. Other assumptions are equally questionable. The relevant theoretical concern, therefore, is the delineation of conceptual linkages between market information and resource allocation in a system where negotiated exchange is not the dominant allocative mechanism (that is, in a predominantly nonmarket or administered system). In essence, the question raised is: What is the theoretical economic rationale for maintaining or expanding market information when the bulk of resource allocation decisions are made administratively, rather than in a negotiated market setting?

There are a number of related empirical issues. In situations where the exchange function has been internalized through ownership integration, contracts, or other nonmarket arrangements, what use is made (in an economic context) of market information? Is market information utilized in these administered exchange arrangements? If so, how does it affect the way in which productive resources are used? That is, does market information impact upon allocative and technical efficiency, technological innovation, or progressiveness in administratively controlled economic systems? For example, does an integrated firm use price information from factor markets to determine the intensity with which it uses various production factors under its direct control? To what extent, for example, would a firm use market prices for corn sweeteners and cane sugar in making decisions on the relative use of these two sweeteners, when it owns or controls a source of supply of one, the other, or of both in fixed ratio?

Alternatively, is market information under circumstances of administered exchange used primarily for determining equity distributions rather than relative resource use? Assume, in the corn sweetener/cane sugar example, that a given food processor has fixed capacity to process and supply both factors and utilizes both based upon owned or controlled production capacity. Market prices for the two products might be used mainly to determine the relative shares of total economic rents to be allocated to each (internal) enterprise. Likewise, the broiler processor who contracts out the feeding of broilers to farmers may use price information from broiler markets as a basis for dividing total earnings between various enterprises, including contract producers. At the same time, decisions on the amount and types of broilers to produce are based upon other information, such as meat prices and feed production capacity.

If market information is used more for making equity determinations than allocative decisions in administered or internalized exchange systems, it would seem appropriate to view such information within the context of social indicators, that is, indicators of relative social or economic well-being. This would probably generate an entirely different set of considerations in compiling and evaluating the usefulness of market information, compared to the use of such information for making allocative decisions.

Beyond the theoretical and empirical questions concerning the function of market information are a number of specific research issues that touch upon the amount, availability, timeliness, accuracy, usefulness, efficacy, and reliability of market information. For example, how do these quality parameters for market information vary among different types of market institutions, such as organized public markets, futures markets, private treaty sales, contract markets, remote computerized trading floors or the so called "electronic market," marketing orders, and other exchange mechanisms?

Once knowledge of these market institution-information linkages is attained, how is it entered into the process of both public and private decision making, with regard to the choice, development, and use of alternative marketing institutions and arrangements? Many private decisions regarding choice of marketing institution may be made in deference to differential availability of information. A large buyer of agricultural products may, for example, choose to purchase primarily by private treaty, because this gives him a differential information advantage over the smaller farmers from whom he buys. This choice, in turn, may impact the total amount of market information available to all participants because of the difficulty in collecting high quality information from private trade. What policies and decision processes can be developed to resolve such potential conflicts?

Related research is needed in the specification of quantifiable measurements for the various quality parameters associated with market information.

A large set of questions concerning sampling procedures for obtaining price and other market information for market reports warrant attention. What share of the total transactions or exchanges must be negotiated in order to generate meaningful price information? That is, as an increasing share of all exchanges are internalized through contracts, integration, or other administrative arrangements, at what point are there insufficient numbers of negotiated exchanges to result in reliable industry-wide or marketwide price information? Are negotiated transactions critical to the formulation of useful price information? For example, if information is used exclusively for equity determinations, would reports on terms of privately administered transactions be sufficient? If so, would these also be useful guides for relatively small market transactions that might occur on the fringe of the industry?

How large a sample must be drawn from an unknown population of trades to generate market information of acceptable quality? The size of the entire population of market transactions for a given product is probably unknown in most cases. Yet, statistical sampling procedures normally derive from known population characteristics. Sampling procedures which would allow for reliability or confidence determinations for populations of unknown size and character would appear to be most useful.

How is the process of sampling for price information affected by lack of uniformity in non-price terms of trade? Terms of trade, such as time and location of delivery, who bears responsibility for product loss, promptness of payment, and the like, frequently vary dramatically between transactions, particularly in nonorganized private trading. This makes price in one transaction not directly comparable with prices in other transactions. How can these be aggregated into meaningful marketwide data? Alternatively, can the procedures used for the collection of market information result in a standardization of non-price terms of trade? For example, would it be feasible to mandate the reporting of market transactions in a standard format, thus, encouraging traders to adopt that prescribed standard format as a basis for trade.

Additional research issues deal with institutional alternatives for amassing relevant market information and for researching related issues. What is the potential to develop information orders, similar to market orders, for the purpose of obtaining market-type information where the exchange function has been internalized, or as a means of mandating reports on private market transactions? A considerable amount of market and nonmarket information is currently obtained as part of administering existing market orders for milk and other eligible commodities. Such information may be useful in its own right, in addition to its use in administering market order programs. To what extent would it be feasible to extend the information gathering aspects of federal market orders to other points of product exchange throughout the food and agriculture systems?

Lastly, are there alternatives to the controlled experiment for gaining reliable answers to market information-related research questions? The controlled experiment, in which market information becomes an experimental variable, and changes in market participant behavior and economic performance are observed, appears to be a reliable research technique and perhaps the most useful of the methodologies now employed. However, these are costly and appear to have considerable political and social limitations. It is not hard to understand political and social resistance to such experimentation when individuals' economic well-being may be significantly affected primarily for the sake of scientific experimentation.