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INTRODUCTION: THEORETICAL FRAMEWORK AND IMPLICATIONS

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In Asian countries which have the potential for achieving self-sufficiency in staple foods, agricultural development is in a period of transition. Agricultural development in Asia since the 1980s has been characterized by the diversification of agriculture, and structural adjustment policies have been undertaken in many Asian countries during this period under the guidance of the World Bank [5] and International Monetary Fund. The diversification of agriculture is an inherent part of development strategy affected by structural adjustment and reflects the changing phase of development of the general economy. The optimum choice of crops for proper land use, the increase of agricultural production in parallel with the increase in demand, the production of agricultural products with higher value added, the processing of agricultural products, and their export promotion are some of the policy measures undertaken in the diversification of agriculture. All these measures prioritize the principle of market efficiency which is a basic idea in structural adjustment policy.

The increasing concern about the market has also generated momentum to reform agriculture which has been substantially subsidized by the government budget. Thus, interest in the actual state of the market itself in each Asian country has increased. In this context, the private sector has drawn increasing attention because it will replace the government which has led agricultural development. The agribusiness and agro-industry are expected to contribute substantially to agricultural development. In order to support numerous agricultural activities, a large number of local traders is crucial as a primary agent for the establishment and function of the market.

The aim of this special issue is to analyze the institutional arrangements within the traditional market system which is relevant to agricultural development in rural Asia. In Asian agrarian societies, economic transactions have been undertaken through the market, but these have not necessarily been well developed and organized. With the emergence of new goods or services as economic development progresses, a mechanism for their transaction needs to be created. To support their transaction, various kinds of institutions of transaction need to be created and consolidated because markets are not prepared in advance for the introduction of new goods and services. Institutions may not always function well; however, traditional institutions which have set down the rules of transaction can be invoked and adapted to carry out the transaction of new goods and services. Institutions and their arrangements are crucial in making a market function well.

A. *Understanding the Reality of the Market in Asia*

When two individuals become engaged in a transaction of certain mutually agreed-upon goods or services, information on the transaction (especially a price or parameters which substitute or supplement the price) is formed, and this information somehow becomes available to a third party who wish to enter the transaction. If the entrance to and withdrawal from the transaction are potentially possible for all three parties, the relationship through which such a transaction can take place may be defined as "the market" in the broad sense. In traditional Asian villages, such economic transactions of various goods and services take place every day.

In order to understand the market as defined above, we must suppose a complete set of perfect markets in the Arrow-Debreu sense. Here "complete set" means that there is a market for every commodity and service which the sellers and buyers want to transact, including the transaction of state-contingent claims. A perfect market has no transaction cost and no asymmetry of information. In the perfect market, each commodity has a price; competitive equilibrium is achieved; a rational incentive system is established; and thus resource allocation is efficient.

We define a situation which does not satisfy the conditions of the "complete set of perfect markets" (due either to an imperfect market or a missing market) as market incompleteness (or incomplete market). The real market that we simply refer to as "the market" implies this sort of incomplete market, namely, the "incomplete set of imperfect markets."

The reality of the market in Asian villages is far from the ideal complete set of the perfect markets, particularly in the factor markets. In the rental market of land used for share cropping for example, the share of harvest crops as a contract parameter is fixed, and its function to meet demand and supply is insufficient. Interest rates in rural financial markets face the same problem. These are instances of an imperfect market. Insurance services as such are not traded in the majority of Asian villages. Therefore farmers themselves earn insurance effects through the transaction of other goods and services. Furthermore, many goods and services are invented as part of the process of development, or they become available through imports from overseas. Nevertheless, markets are not necessarily ready for these goods and services. These are instances of a missing market.

B. *Institutional Arrangement*

In the field of neoclassical economics, the completeness of markets has been regarded as a prerequisite for economic activity, therefore institutions have not been considered to have any influence on economic performance. For this reason, the study of institutions has not gained sufficient recognition as a research subject. Nevertheless, we consider that institutions are what complement or supplement the incomplete market. The developing field of the economics of information and the new institutional economics have enabled us to elucidate the economic transactions in such an incomplete market. Bardhan [1], Hoff-Braverman-Stiglitz [3], and

Hayami-Otsuka [2] have been conducting theoretical and empirical research on institutions, organizations, and contracts in agricultural economies. An understanding of these studies allows us to undertake the following definition of institutional arrangements.

When there is market incompleteness, a signal other than the market price (or a combination of price and another signal) will be used in the transaction. This is because the price in an imperfect market does not accurately reflect the economic value of goods and services, and the market price itself does not exist under a missing market. Long-term contracts are adopted, interlinkages among plural production factors or products are mobilized, or personal connections or networks that are created by repetitive and long-term transactions are used. There can be many other forms of signals and arrangements. All of these in their totality are defined as the "institutional arrangements." In other words, all of the non-price or quasi-price mechanisms which enable transactions to take place in the incomplete market are the "institutional arrangements."

Institutional arrangements in Asian villages are a dynamic process and change over time. An institutional arrangement may not always function well. However, the emergence of proper institutional arrangements to replace the old ones can be due to technological innovation, the introduction of new products, a change in relative price, or the reform of the legal and legislative framework. Our concern is to analyze the institutional arrangements within the dynamism of agricultural development in a region which has succeeded in carrying out rapid economic growth.

As mentioned earlier, the economics of information and the new institutional economics have provided the theoretical framework for analyzing economic transactions under market incompleteness. Within this framework the existence of transaction costs, moral hazards, and adverse selections are seen as the three important defects that occur under market incompleteness. However, the obvious symptoms of these defects, particularly moral hazards and adverse selections, have hardly been observed in the studies presented in this special issue. This observation is consistent with our view that the institutional arrangements deter the emergence of these defects. Institutions can have negative or conservative effects, nevertheless proper institutional arrangements can be produced which can improve the economic welfare of rural people.

The interpretation of "institutional arrangements" can vary from an institution in the ordinary sense to the market itself, or the legal framework which supports the market mechanism (such as a quality standard system and the Fair Trade Commission). The three main elements forming the market are: the rules of economic transactions, the individual players or organizations who conduct transactions, and the physical infrastructure of the market. We pay attention in this study to the first two elements as institutions, particularly: (1) traditional and/or autogenous institutions such as land tenure, labor practices, and customary law; and (2) organizations such as farm households, firms, and unions where the domain of membership is defined. North [4] clearly distinguished an institution from an organization by analogizing an institution as rules and an organization as players in the game

TABLE I

	Incomplete Market	Institutional Arrangement	Factor of Change
Yokoyama	Rural finance	Land tenure	Diversification of agriculture (vegetables)
Fukui	Rural finance	Land tenure	Agricultural and rural development
Yonekura	Rural finance	Ties among traders	Processing of agricultural products (feed)
Fujita and Hossain	Groundwater/ Rural finance	Contractual arrangement based on land tenure	Technological change (irrigation with tube-wells)
Kurosaki	Insurance	Subjective equilibrium[a] of farm households	Diversification of agriculture (livestock breeding)

[a] Regarding subjective equilibrium with missing markets, see Chihiro Nakajima, "Subsistence and Commercial Family Farms: Some Theoretical Models of Subjective Equilibrium," in *Subsistence Agriculture and Economic Development*, ed. Clifton R. Wharton, Jr. (Chicago: Aldine Publishing Co., 1969)

theory. The institutional arrangements which we defined include the organizational arrangements such as the subjective equilibrium of farm households (see Kurosaki's paper).

We deal in this special issue with those forms of institutional arrangements that were considered the most evident and important among all those observed by the contributors. Table I shows the sorts of market incompleteness that were problems in the respective case studies and the kinds of institutional arrangements analyzed that coped with the incompleteness.

As the table shows, a majority of the case studies report the incompleteness of rural financial markets (Yokoyama, Fukui, Yonekura, and Fujita and Hossain). This indicates that agricultural development is causing increased demand for capital in rural areas. Even when there were no explicit interest rates as parameters, observation of institutional arrangements enabled us to gain information for estimating interest rates. Also, other factor prices which are necessary for estimating the distribution of income could be imputed (Fujita and Hossain's paper) when the institutional arrangements are set up well. This in turn means that the economy is functioning well. Such an economy functions well because institutional arrangements complement market incompleteness, not because the market is perfect.

C. *Major Findings and Implications*

The major findings of the studies in this special issue can be summarized in the following four points. Firstly market incompleteness does exist and institutional arrangements to cope with this problem can be observed in Asian villages. This incompleteness, particularly of the factor markets, is related to the social structure of agrarian societies. Therefore changes in the institutional arrangements are very likely to accompany a transformation in the social structure on which the institutional arrangements are based. Secondly, the sphere of a certain institutional arrangement is restricted by its social background which limits its effect range to a village, a specific group, an organization, or a social relationship. Thirdly, an existing institutional arrangement is rational under the given existing constraints. Our case studies did not observe any marked inefficiency in resource allocation given the various constraints that an institutional arrangement had to cope with. This means that autogenous and/or traditional institutional arrangements are not simply outmoded affairs harmful to the process of development, and they should not be rejected indiscriminately. Rather they could be capable of contributing to agricultural development and achieving a well-arranged market economy. Finally, the forms of institutional arrangements are changing in rural Asia under the process of agricultural development. This change is widening the sphere of more uniform institutional arrangements, and price signals are becoming much more important than they were in the past. Rural Asia is responding to this change and is adapting effectively to it.

These findings have important implications for structural adjustment policy that takes a "market-friendly approach." A fundamental idea of structural adjustment policy is that the presence of a complete market is a prerequisite. However, such a complete market hardly exists in Asian agriculture. Nevertheless, policies based on this idea have been implemented and the diversification of agriculture has somehow taken place. This must be due to the fact that some traditional and/or autogenous mechanisms have complemented or supplemented the incompleteness of the market. We regard this kind of change and response as also a form of "institutional arrangements." Our findings revealed that agrarian societies with capable institutional arrangements have succeeded in responding to diversification, and the institutional arrangements must have played a substantially important role in supporting agricultural development. In our studies we sought for instances of such capability in the countries of Indonesia, the Philippines, Bangladesh, and Pakistan. The institutional arrangements may not always work out in a favorable way. There is always a possibility that the arrangements will not take form, or that an old institution will suppress change. Where a desirable institutional arrangement is lacking, structural adjustment policy cannot be carried out effectively. To conclude, if the recent market-friendly approach takes into consideration the capability of the institutional arrangements in each country and within the local areas of each country, it would substantially increase the applicability of structural adjustment policy.

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