

Coordinating Units: Farmers' Cooperatives in China
-----A Comparative Study of Organizational Design in Agriculture
between China and Japan

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Abstract: From the perspective of organization design, this paper investigates and compares the levels and characteristics of China and Japan's agricultural organization. (1) In Japan, the individual household is the building block of the agricultural organization in that they possess complete moving rights of their labor and complete property rights over land (although the land mobility is limited by government). On the other hand, in China, the basic building block of agricultural organization is transferred from the individual (in the PC period) into the household (in the HRS period). Nevertheless, the rural households in China are an incomplete economic entity in that they possess incomplete moving rights over their labor and incomplete property rights over the land. (2) For the organizational design in Japan, it is a dual organization encompassing JA and government. Whereas in China, the transition from the PC to HRS left a blank in the coordinating functions, which explains well the reason why the farmers' cooperatives are needed urgently. (3) The farmers' cooperatives function as coordinating units in that, they are able to work as a complete economic entity, they coordinate the agricultural production and marketing between petty scale farmers and government, and they perform part of the functions of middle management.

Key words: organizational design; agricultural organization; farmers' cooperative in China; JA.

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1. Introduction

In spite of the fast-growing economy, especially the brilliance of the manufacturing sector, the fact cannot be overlooked that the rural population in China is still at 810 million, among which 528 million makes up the rural labor force, a production of which merely accounts for 12.6% of the GDP (CSY2006). These figures are definitely shocking, not only because of the massive size of the population, but also due to the increasing disparity between the huge numbers of the rural population and the low productivity, and therefore the low income, of the rural labor force. Undoubtedly, agricultural problems are the most crucial issues facing China, which urgently need to be addressed as regards to its economic development.

Economists in Western society, however, should not neglect the fact, despite the ease in which to do so, that China has a communist past in her social, institutional and organizational apparatuses. It is only since 1978 that reforms, such as the new organizational innovations of the HRS (Household Responsibility System) in rural organizations has commenced and that in 1984 the People's Commune, the classic socialist organization that lasted for twenty-six years, was fully substituted by HRS. Besides the agricultural production, private sectors are gradually permitted to participate in the operation of former state-owned organizations in food procuring, storage, dispensing and sale departments. In 1992, China's economy was disclosed by the Openness policy, which was launched and promoted by Deng Xiaoping. From 1993, large scale capital-intensive enterprises started to invest in the rural sector, massively employing rural labor. The HRS institution, based on the dispersed and petty scale households, began to be challenged by the disparity between the large numbers of laborers needed for production, and the unorganized scattered and petty scale farmers. It was not until July 1st, 2007, that farmers were officially permitted to organize their own associations. Herein lies the focus of this paper, about which will be elaborated on in greater detail, including organizational and institutional transitions during the period of

China's economic transformation from a socialistic economy to a market-oriented one. How to take the view of and theoretically place the development of China's agricultural organizations from the perspective of organizational theory, among which in this paper the concept of organizational design is to be the theoretical focus of analysis, is both intriguing and profound, in understanding and interpreting the nature and the prospect of China's agricultural society.

The organizational changes in China's rural sector are to be contrasted with the organizational characteristics of Japan's agriculture, in that they both possess features of East Asian rural organizations---- the dispersed and petty scale farms. The comparisons are to be conducted from the perspectives of organizational theory, in which we scrutinize the organizational design and design attributes of organizations in both countries. This paper is organized as following, first we go over the concept and literature of organizational design, in which levels of analysis are to be interpreted; then follows a concise outlook of organizational design in Japan's agriculture; finally, the transitions in organizational design in Chinese agriculture are to be interpreted and analyzed.

2. Theoretical framework: organizational theory; organizational design

2.1 The foundations for applications of organizational theory

Although there had been more than thirty years that China's economy was guided by socialistic institutions (as far as the agricultural sector is concerned, the People's Commune lasted for twenty-six years, from 1958 to 1984), the contemporary economy is being treated as if it was born and brought up completely the same with that of a capitalistic economy. Too little of China's history was recognized by economists, to say nothing of the profound and permeating effects the socialist system had left on the current era, the economic apparatus and organizational mechanisms in the gradually emerging new order.

Leaving the elements and factors of changes in mechanisms between old and new organizations as the motif of another discussion, in this paper, I exclusively lay the emphasis upon one thing only: the organization. It is presumed here that, whatever the economic system and structure is, socialistic or capitalistic, the organizations of production in such a society can be encapsulated in one consistent theory and therefore can be contrasted by distinguishing attributes in the theory. This is the premise as well as the foundation, upon which the analysis and comparisons are to be conducted. Two main stages of China's agriculture are to be elaborated on, the PC and the HRS. Due to its stability and consistency as the fundamental industry throughout the economic development during the historical periods, the agricultural sector is the primary focus here. Japan's agriculture becomes the contrasting object due to its organizational analogy with China in that its agrarian organizations both bear the features of dispersed and petty scale individual households. The organizational traits in Japan's agriculture, formed when capitalistic Japan chose a different path in achieving its economic development, would be interesting for a socialist country. Discussing and comparing the organizational outcomes of differing economic systems and structures might be profoundly intriguing.

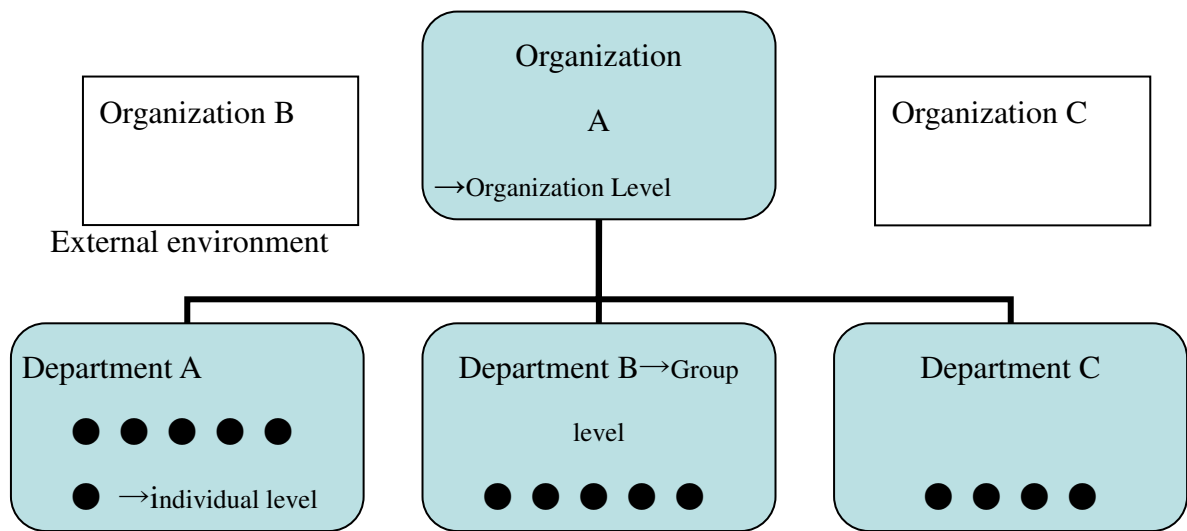
The national economy under a socialist regime can be understood as a huge organization, or a highly centralized gigantic company, with property rights, local information and decision-making routed to the central planning board. These organizational features, fundamental for a socialistic economy while distinguished from a capitalistic one, enable organizational theory to be applied for the purposes of comparison.

2.2 Organization theory applied in the analysis

Organization theory is concerned with the big picture of the organization as a whole and its sub-systems. Sub-systems are nested within organizations, and the organization can be divided into different sections corresponding to different levels of

analysis. As illustrated in Exhibit 1, usually an organization is characterized by four levels of analysis, the individual human being (the basic building block), the group or department, the organization itself, and the external environment (inter-organizational set, or community).

Exhibit 1 Levels of Analysis in Organizations



Source: Richard L. Daft, *Organization Theory and Design* (9th Edition, Thomson South-Western, 2007), p33. Based on Andrew H. Van De Ven and Diane L. Ferry, *Measuring and Assessing Performance* (New York: Wiley, 1980); and Richard L. Daft and Richard M. Steers, *Organizations: A Micro/Macro Approach* (Glenview, III.: Scott, Foresman, 1986).

Different levels of organization are one of the interesting topics here, because they provide a basic instrument for the organizational analysis and comparisons. In the following sections, Chinese and Japanese agrarian organizations are analyzed and compared by their individual level, group level and the organization level. For example, in next section the main topic is that, the agricultural productions are performed by production and management units¹ organized on differing levels, i.e., the individual

¹ For example, refers to Takahashi(1987),p104. The production unit is what Takahashi means by “production process unit”, standing for the basic organizational unit to cultivate, plant seeds, harvest, dry up and manufacture. The management unit in an agricultural organization refers to administrative function and management function. Administrative function means to plan, organize,

level, group level or organizational level.

Another concept, *organizational design* is described by its design traits, which includes structural and contextual dimensions. Structural dimensions describe the internal characteristics of an organization, which encompasses formalization, specialization, hierarchy of authority, centralization, professionalism and personnel ratios. Contextual dimensions describe the organizational setting that influences and shapes the structural dimensions, which falls into five parts: size, technology goals and strategy, environment and culture. Focus is to be laid upon centralization, hierarchy of authority, size, organizational goals and strategy, for the agrarian organizations. As the agricultural sector is the focus here, to scrutinize the organizational transitions of China's agriculture, it is important to investigate the attributes of the dimensions of organizational design within China and Japan's agrarian organizations respectively.

3. Basic building blocks(individual level): complete(Japanese) and incomplete(Chinese) economic entity in agrarian organization

The Production unit stands for the basic production and management unit making up the organization (Department A in Exhibit1), being the fundamental building block of an organization.

After WWII, upon implementing economic development plans, both China and Japan were up against a similar situation: large numbers of dispersed and small-scale farmers. How to organize them together to achieve the scale effect and produce more efficiently? In another term, how to decide the level to "scrap and build"? At what level should the production and management units (abbreviated as P&M units) for scrap and build be determined, in order to conduct on an organizational, group, household, or individual level? Basically there are two approaches for organizational structure

administrate and coordinate. Management function means to provide the materials, produce, selling and finance for the production.

reforms: one is “scrap and build” on a household level, to break down the rural households with lower productivity, screen out households with higher productivity and promote resources in households with lower productivity to flow into those with high productivity. The other approach is to “scrap and build” on the level of a P&M unit, without breaking down the households. It is to broaden the scale of agrarian P&M function by consolidating the units with lower productivity into those with higher productivity.

There had been heated debates on this issue both in Japan and China during the last half century. As the result, the latter approach, to “scrap and build” on the level of P&M unit was pragmatically adopted and enforced in Japan, without hurting the basic making-up of rural households. On the other hand, in her socialist ideology, the former approach was chosen to reform the agrarian organizational structure. After land reforms, the policy of “independent farming” was established in Japan and farmers were expected to be self-supporting and –employed on their allocated land. At this time, the basic building block, or the P&M unit, is the rural household.

On the contrary, in China after land reform (1949~1953), the elementary and the advanced cooperatives (1953~1958), when entering into the PC period (1958~1984), the rural households were dismantled in agrarian production, farmers were reorganized by the three-leveled production team system. The first approach was practiced in the PC period. The basic building block for agrarian production is the individual, rather than rural families, and the production team becomes the Department B in Exhibit 1, functioning on a group level. Hence, the layers of the organizational structure are as such, that the individual → production team → production big team → the People’s Commune². The individual is directly connected, economically and administratively, to the upper management board. The organizational design and structure concentrate solely

² The latter three layers are the composition of the three-leveled People’s Commune.

on the economic and administrative dimension, neglecting the social dimension³. In other words, the PC regime puts emphasis on people (farmers) as economic producers while overlooking the fact that they are also consumers and the bare essentials that farmers are biological human beings, for which family is a natural unit. Discernibly, this is one of the most profound driving forces leading to the collapse of the PC and the reconstruction of the HRS.

Compared to Japan's policy of "independent management" by farmers, which has been the basic thread running through the economic development, under the HRS regime the basic rural production household is a dependent management unit, possessing limited liability and capacity over its production factors. The ability of reallocating its own labor is limited: farmers with rural household registration can not immigrate freely into urban regions, which means that the moving of labor with a potentially higher quality from that of a lower income region to higher income region is hampered. Then the reallocation of land, the basic production material, is limited; the property rights over the contracted land ultimately belong to the state, farmers having only the rights of utilizing it. This situation has not been changed until *The Property Rights Law of People's Republic of China* was passed on March 16th, 2007, and went into effect on Oct 1st, 2007, in which the property rights over land were permitted to belong equally to the state, the collective and the individuals. The limited rights of farmers over their own labor and the rural land render the basic P&M unit in China's agrarian organization an incomplete unit, possessing merely part of the rights over the allocation of production materials. This in turn resulted in production performed undoubtedly below the PPF(productivity possibility frontier).

From 1993, however, there saw a new trend emerging in the agrarian sector, the Agricultural Industrialization, where enterprises with large investments came into the

³ Because the PC is an organization unifying both the function of production and government, being an "unification of Government and Society"(zhengsheheyi).

agricultural sector and hired individual farmers on a massive basis.

4. Coordinating units: Farmer's cooperatives in China's agriculture

Since 1978, China has opened its closed door and trod on a path toward economic development. Among industries, the agricultural sector predominated during the period of the Reform and Openness. In 1978, the primary industry, namely, agriculture, occupied 27.9% of the GDP(CSY2006, p58), 70.5% of employed labor force(CSY2006, p126) and 14.6%(year 1980) in total investments in fixed assets(CCS1949-2004, p15)⁴. Accompanied by the opening of markets of production materials and farm production, as well as the development of town and village industries, farmers' cooperatives were called forth to perform the coordinating role between production and marketing, and between individual farmers and administrative governments. It is well known that dispersed and petty scale farms are the characteristics of Asian agriculture. In retrospect, with stress laid upon the development of the farmers' cooperatives in China, the organizational features of Japan's agriculture are examined with an intent to find some hints for the development of the farmers' cooperatives in China.

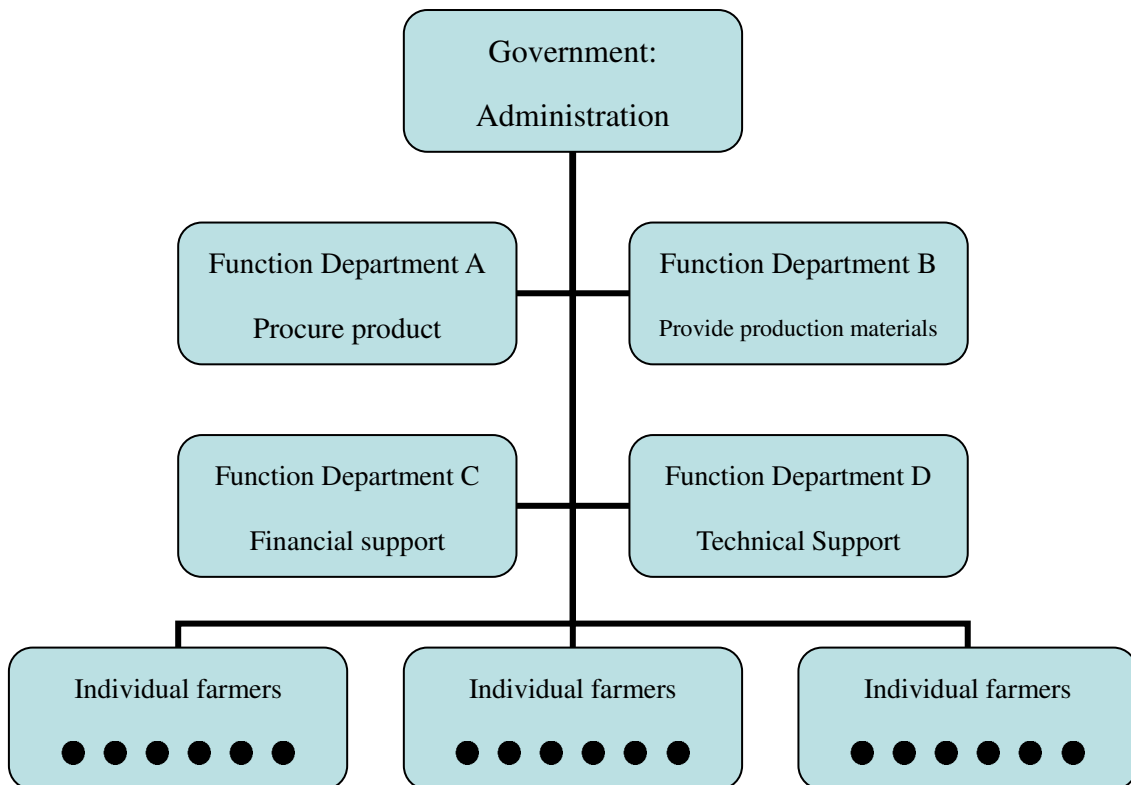
On July 1st 2007, farmers are permitted to organize their own associations out of their own initiatives (No.498 Act, issued by the State Council on May 28th, 2007). According to the Act, there should be at least five members to commence a farmers' association, among which farmers at least should account for 80% of the total number. Based on the research of mainstream associations in coastal area, there are mainly three

⁴ The item of "total investment in fixed assets" is divided by urban and rural. The share of primary industry(agriculture) in GDP among three industries, the share of primary industry in employed labor force, and the share of total investments in fixed assets in the rural sector (urban sector plus rural sector equals 1) in following years are respectively, (1980)29.9%, 68.7%, 14.6%; (1990)26.9%, 60.1%, 27.5%; (2000)14.8%, 50.0%, 20.3%; (2005)12.6%, 44.8%, 15.4%. From these figures, we discern that, in twenty-five years of economic development, the share of GDP in agriculture has reduced to less than half, accompanied with a sharp reduction of the labor force in agriculture by almost one third, however, the investment of fixed assets in agriculture, although increased, still remains at a low level.

types of associations.

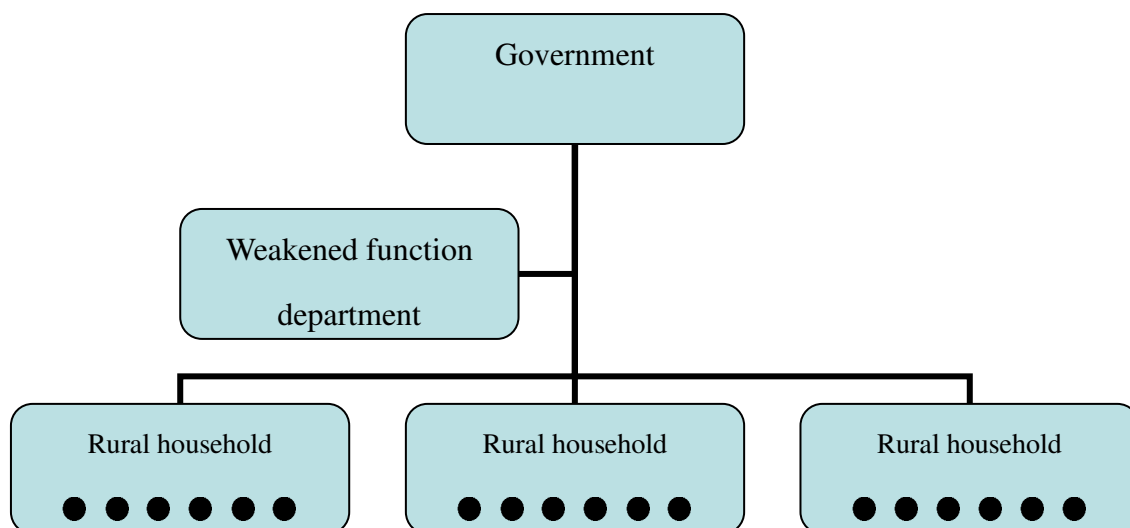
The organizational transition from the People's Commune to the Household Responsibility System can be viewed as a process of decentralization. Before the Reform and Openness in 1978, the organizational design was hierarchical, which is shown in Exhibit 3. Because of the economic inefficiency under this regime robbed farmers of their incentive, the Household Responsibility System, which motivated the individual rural labor to work, emerged in 1978 and replaced the PC regime completely in 1984. HRS, as a decentralized organization, continued in the opposite direction in that, the gradual abolition of governmental departments----such as agricultural product procurement department, the production material supply department, technical and financial support departments----worsened the economic environment where the individual rural households lost the means in which to coordinate their petty production and scattered markets. The organizational design of HRS is illustrated in Exhibit 4.

Exhibit2. Organizational Design in People's Commune



Let us examine the dimensions of organizational design one by one during the organizational transition from PC to HRS. First off, since in PC times, all of the land properties belong to the state, namely the top management, the size of agriculture in China can be viewed as national---as if China is a gigantic cooperation, which is highly centralized, with a vertical hierarchy of authority; its organizational goal being its adherence to socialism, and a citizen-welfare-orientation instead of a profit-orientation. Therefore, in spite of its size, one could say that the PC in China is just like a huge company, albeit not be a true company because of its non-profit-oriented nature. The basic building block of the organization is individual instead of household. The organizational design of PC is: government →function department→individual. The inefficiency led by low incentives and moral hazards in working caused the organization to change into the HRS.

Exhibit 3. Organizational Design in HRS



The centralized control of production was gradually transferred to the rural household, although the land property rights and the mobile liberality of rural people still exist----which cause the traits of the Chinese rural household to distinguish sharply from Japan's in that, they are an incomplete production entity. Therefore, in HRS the nature of incomplete rights makes the rural household an unstable building block of

agricultural organization. In this sense, the farmers' cooperatives not only function as production coordinating units, but also work as an economic entity complementary to the incomplete rights of the owner of an individual household. The organizational design in HRS is: government to household, where the government directly faces a vast multitude of scattered and petty scale farmers because of the gradual abolition of former functional departments. Therefore, the farmers' cooperatives are called to fill in the coordinating blanks between government and farmers.

3. The organizational characteristics in Japan's agriculture: Independent Rural Household and JA (Japan Agricultural Cooperatives)

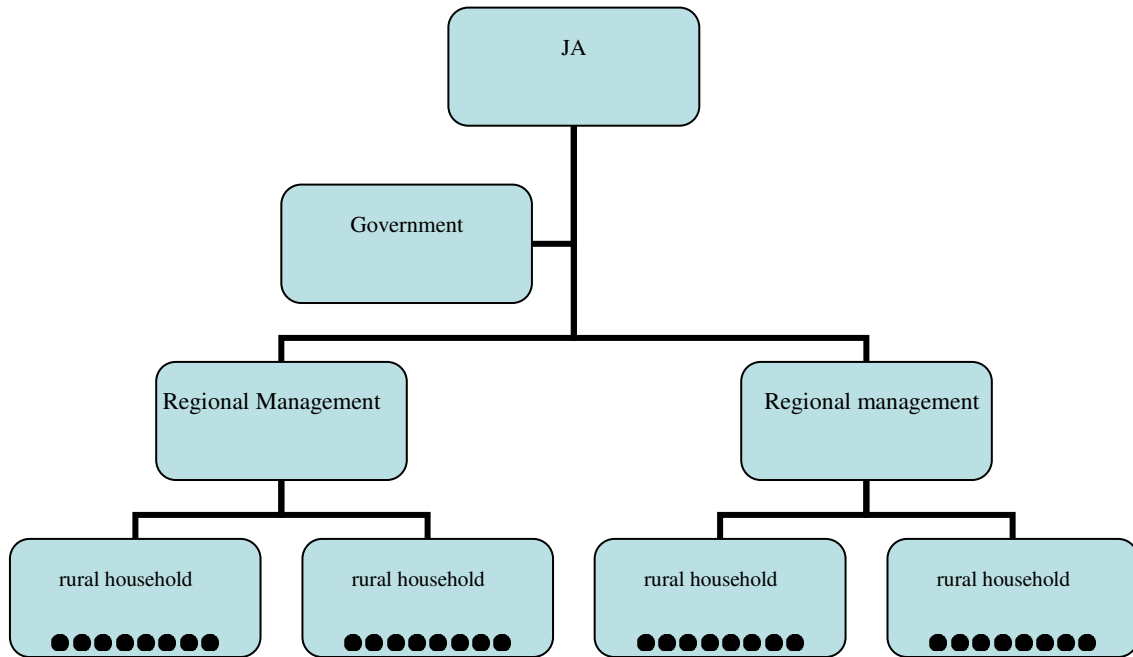
After WWII, land reform was carried out in Japan to create self-employed farmers (kosakunou). As we mentioned above, the scattered and petty scale farms become major traits of Japan's agriculture (Kato and Sakamoto, 1967). Therefore, a relatively high labor/land ratio (Hayami and Ruttan, 1985) is one characteristic of Japan's agriculture, and this trait was overcome by combining the individual rural household into JA. The relationships among JA, government and rural households are illustrated in Exhibit 2. In principle, JA has three functions: a production-organizing function to help supply food for daily life and production materials (such as fertilizer, agricultural chemicals and machines), as well as helping to market products; a financial function for savings, loans and securities; and an insurance function.

Compared to JA, which plays an economic role in agricultural society, government, on the other hand, performs the administrative function and works primarily on the side of public finance and product price/quantity adjustment.

As compared to the traits of rural households in China's agriculture, the rural household in Japan is an independent entity, in possession of the complete property rights of farm land (although the government puts strict limitations on land mobility) and their labor. This point of Japanese rural households functioning as a complete

independent entity distinguishes the composition of organizations in rural households between Japan and China.

Exhibit 4. Relationships among JA, Government and Rural household



In Japan’s agricultural organization, the building block is the rural household instead of rural individuals, which differs profoundly from China. Connected by the regional management, individual households are coordinated in their production and marketing. The significance of regional management is that it functions as middle management, which in turn connects the lower management and upper management. Upon this idea, Takahashi (1987) advocates that, the agricultural sector should induce the competitive mechanism on the basis of middle management rather than the household, labeling this as “coordinating in the neighborhood while competing among regions⁵”.

Therefore three conclusions can be drawn from above discussions.

⁵ This idea is based on the practice of conduct in Japanese cooperation that, “cooperating inside the firm while competing among firms”.

- 1) Concerning the household level of analysis in the rural sector, the basic building blocks in Japan are the households, while in China they are rural individuals.
- 2) On the organizational level of analysis, Japan has developed a dual organization consisting of JA, which functions in tandem with the government, whereas China, in its centralized organization, concentrates a unified network encompassing all of the functions of economic, administrative and social development.
- 3) The upper lower managements are connected by middle management.

5. Conclusions

From the perspective of organizational design, this paper investigates and compares the levels and characteristics of China and Japan's agricultural organization. Several conclusions are drawn from the discussions.

- 1) In Japan, the individual household is the building block of the agricultural organization in that they possess complete moving rights of their labor and complete property rights over land (although the land mobility is limited by government). On the other hand, in China, the basic building block of agricultural organization transferred from the individual (in the PC period) into household (in the HRS period). Nevertheless, the rural household in China is incomplete economic entity in that they possess incomplete moving rights over their labor and incomplete property rights over the land.
- 2) For the organizational design in Japan, it is a dual organization encompassing JA and government. Whereas in China, the transition from the PC to HRS left a blank in the coordinating functions, which explains well the reason why the farmers' cooperatives are needed urgently.
- 3) The farmers' cooperatives function as coordinating units in that, they can be able to work as complete economic entity, they coordinate the agricultural production and marketing between petty scale farmers and government, and they perform part of the functions of middle management.

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