Institutional Change and the Transformation of East Asian Agriculture: A Historical Interpretation

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I. The East Asian Agricultural Miracle

In the early 1900s the American agronomist F. H. King traveled to China, Korea, and Japan to observe agriculture. Astonished by their family farms, he noted that “almost every foot of land is made to contribute materials for food, fuel or fabric.” 1)

Those farms supported a large population with little livestock; land productivity was extremely high but labor productivity low. Some 80 percent of the population lived and worked in agriculture, which contributed 70 to 80 percent of gross domestic product. In China and Korea in 1900, agriculture was the dominant lifestyle, with the following characteristics:

- Slow to innovate
- Intense household specialization
- Low productivity
- Efficient markets
- Land-saving and labor-using modes of production

Today's agriculture in East Asia is very different than that observed by F. H. King more than a century ago. Except in China, the overwhelming majority of family farms are agro-business enterprises imbedded in a modern market economy. The state regulates agriculture and protects it from the intense competition of today's global economy. Today's

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agriculture in Japan, Taiwan, and South Korea produces less than 5 percent of gross domestic product and provides employment for less than 10 percent of the labor force. Yet it continues to play an important role in national welfare and economic life.

China, by contrast, has seen an agricultural revolution over the last twenty-five years during which agriculture has performed better than at any time in China's history. The problems are still immense. But the "green revolution" is continuing, as the government tries to address the difficult problems of unemployment, high rural taxation, and poverty. The challenges for China's agriculture are to increase factor productivity, adjust to changing markets, respond to global competition such as imports of agricultural products, and facilitate greater rural employment.

In Africa, especially south of the Sahara, Latin America, and the Middle East, agriculture is still poor and backward. Governments of those regions have exploited agriculture and done little to improve productivity or living standards. The East Asian transformation, by contrast, occurred because appropriate political institutions were created to make agriculture productive and innovative. Let us look at these institutions and what they contributed to the modernization of agriculture.

II. Institutional Change and Agricultural Transformation in East Asia

I want to bring two stories about this remarkable agrarian transformation to your attention to emphasize the role of institutions in agricultural change. The first story is how the agrarian system of 1900, as described by F. H. King, had evolved over the centuries. Historically, East Asian agriculture was one of low productivity in an efficient market economy managed by a state that promoted and protected agriculture. Not only did premodern markets operate efficiently, but the East Asian state encouraged private property and upheld the traditions of village, lineage, and family farm life. During the sixteenth,

3) For the importance of political institutions in promoting economic change, see Stephen Haber, Douglass C. North, and Barry R. Weingast, "If Economists Are So Smart, Why Is Africa So Poor?" Wall Street Journal, July 30, 2003, p. A-12.
seventeenth, and eighteenth centuries, this East Asian agrarian system produced high premodern living standards similar to those in England at the time.\footnote{This argument can be found in Kenneth Pomeranz, The Great Divergence: China, Europe, and the Modern World Economy (Princeton: Princeton University Press, 2000).}

How did this agrarian system become transformed in the nineteenth and twentieth centuries? This is the second story, which I tell below.

In the late nineteenth and early twentieth centuries, the leaders of Japan, Korea, and China responded to foreign threats in very different ways. Japan’s leaders challenged and rebuffed the foreign threat and by the 1860s had achieved a consensus on how Japan should be governed and its new goals set. Korea’s government failed to respond to its foreign threat and thus failed to set any national goals. China’s leaders performed better than Korea’s but were unable to reach a consensus for new goals and how to achieve them. As for Taiwan, it was still a province of China in 1884 and became a colony of Japan in 1895.

I believe the affirmation of private property rights and their protection by the state was the important institutional change that initiated the transformation of East Asian agriculture. That change first originated in Japan and then was applied to Japan’s colonies, Taiwan and Korea. It came much later in China.

In 1872 the Meiji state introduced a land survey followed by a new land tax law that conferred property rights on landowners outside. Although the new law did not provide rights to tenants or workers, for the first time in Japanese history the state protected individuals right to own land, freely use it, transfer to other parties, and so on. The new land tax that followed the survey was a heavy burden for many households, but it was fairly imposed and compelled landowners to use their land efficiently and produce for the market.

Although some redistribution of land from feudal families to commoner families took place, the unequal distribution of property rights continued to be a source of tenant and landlord disputes until World War II. The Japanese Ministry of Agriculture and Forestry had a plan whereby it would compensate landlords and transfer their lands to tenants, making them into family farms, but did not have the money to carry it out.

Nevertheless, the Meiji state had created a landowning class that helped modernize Japan’s agriculture, making it possible for family farms to contract with one another more efficiently and produce more for the market. More than at any time in Japanese rural history, rural households were induced to use their land efficiently, which in turn improved their living standards. Thus the Meiji land survey and land tax reform were important breakthroughs in
the modernization of Japanese agriculture.

Those reforms were applied to Taiwan in 1902 and Korea in 1914, again changing the rules for how land was to be owned and used. These reforms, then, created incentives for a new landowning class to use its land efficiently. These reforms also created a more equitable land owning system, contrary to the views and writings of many Marxist scholars. After 1945 land reform in Taiwan and Korea redistributed property rights to equalize landholding rights.

To summarize, the Meiji state and its colonial governments institutional reform in Korea and Taiwan created a new family farming class and gave households the incentive to participate in the market. However, contracts between landlords and tenants were often violated, with violent disputes ensuing. Transaction costs for farmers also increased. But after World War II, land reform made contracting between farms beneficial for all parties and lowered transaction costs.

III. The Special Case of China

China's agricultural history, by contrast, was very different because China's government was not able to carry out the same institutional changes as occurred in Japan, Korea, and Taiwan. In the 1840s, the Chinese began debating how to deal with the foreign threat. Rather than starting with a major reform of the property rights system, as the Japanese did, the Chinese leaders decided to make imperial China strong and wealthy in a very different way. First, the Qing state accepted the existing property rights and made no effort to conduct a land survey or increased the land tax. Instead, Qing state leaders used government tax revenue to induce Chinese merchants to manufacture goods that would make China strong militarily. But these official-merchant partnerships produced corruption and inept management. Thus, few reliable armaments were produced. Not until after 1908 did Chinese officials invest in new seeds, fertilizers, and farming practices to raise land and labor productivity.

Even then, however, the Chinese government was unable to carry out a nationwide land survey and tax reform to strengthen China's rural foundations. In 1928 the Nationalist government tried to introduce such reforms in Jiejiang Province but met with fierce opposition from landowners who feared the government might take away their property and increase their taxes.

Thus between 1860 and 1911 China's agriculture made little advance except in the
provinces along the coast, where market integration enabled those farmers to produce and market industrial crops. But in the interior and western provinces little new specialization took place, and farmers remained poor.

Sun Yat-sen believed that China's land problems could be solved by a single tax upon landowners, whereas Mao argued that China's agrarian problems could be solved only by violent land reform. But the American agricultural economist John Lossing Buck believed that if China's rural people's property rights were protected and property more equitably distributed, all they would need would be new technology and capital. Buck and his students, who had conducted many surveys of Chinese family farms, knew that family farms were efficient, as did F. H. King.

In the 1930s and 1940s the Nanjing government established a network of agricultural colleges along with some research stations that were to produce high-yield and disease-resistant wheat and rice seeds. The government planned to introduce these seeds after the civil war was over. Instead, the new Communist government introduced these new seeds in the early 1950s, which greatly increased rice and wheat yields in the following decades.

Between 1911 and 1940, then, the Beijing and Nanjing governments had been unable to carry out the same institutional changes as had the Meiji state. For one thing, Chinese officials did not understand that farmers needed their property rights protected and a more equitable landowning system, whereas the state needed a new land tax system. Such changes would have given farmers incentives to farm their land efficiently. But such a solution to China's agrarian problem would have to wait until the civil war was over and foreign threats to China's national security had ended.

When the Chinese Communist Party came to power on October 1, 1949, it could have adopted the Meiji institutional reforms described above, thereby introducing a "green revolution" and resolving much of the equity problem in China's countryside. But instead it used land reform as a means to reorganize rural life and impose collective farming on Chinese agriculture, which was a terrible mistake. To be sure, farm output rapidly increased, but only as a result of applying large amounts of capital. As a result, for the next three decades Chinese agriculture was inefficient and wasteful.

During 1980-1982 the Chinese government began to reform its rural farming system into one of mixed property rights. This new system-village brigades leased land to selected households and renewed those leases on a trial basis-provided rural people with new incentives to increase output and raised their living standards. But the reforms did not go far
enough. High transaction costs, unprotected property rights, and unfair seizures of rural properties were drawbacks of the new system.

But the new institutional changes in China’s countryside had created a new arrangement of property rights that gave farmers new incentives to increase production. At the same time, public investment in agriculture increased. These two developments initiated a real “green revolution” in China. For the first time, rising total factor productivity accounted for much of the expansion of farm output. Over the past twenty years, the living standards of the rural people of China have risen more than at any time in Chinese history, thanks to institutional change, increased public investments, and extending more property rights to rural households.

IV. Conclusion

East Asia’s agricultural transformation has been a spectacular achievement. Within a century the countries of Taiwan, South Korea, and Japan modernized their agricultural communities and improved the living standards of their rural peoples. Family farms were free to use their property as they wanted. Although the transition to modernity was difficult, rural families were successful because they worked hard, saved, participated in community life, and were able to decide how to use their property in their own best interests. In addition, these regimes promoted a “green revolution.” The inequities of the agrarian system were eventually reduced through land reforms after World War II.

China’s story was very different. Foreign nations made it difficult for Chinese leaders to solve their agrarian problems. Chinese leaders also imposed unnecessary hardships on their rural population. Although it was hard for China’s leaders to change their policies, in the last quarter century, their institutional reforms have begun to provide new benefits for Chinas rural people.

One of the most serious problems facing Chinese agriculture today is how to equitably and efficiently distribute property rights. This is a huge challenge for China’s people and their government.
제도 변화와 동아시아 농업의 변화
새로운 역사적 해석

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〈국문초록〉
동아시아에 있어 농업의 전환은 눈부신 성취를 이루었다. 본 논문에서는 동 아시아의 농업부문의 두드러진 변화와 관련된 얘기들을 소개하고, 이를 통해 농업의 변화에 있어 제도의 역할을 강조하였다. 일제기 동안, 대만, 한국 및 일본에서 농업사회는 근대화되었으나, 농민의 생활수준도 개선되었다. 가족농은 원했던 토지를 자유롭게 이용할 수 있게 되었다. 비록 근대화로의 이행은 쉽지 않았지만 농민들은 성공을 거둘 수 있었으며, 이는 이들이 열심히 일하고, 절약하고, 지역사회의 활동에 참여하였기 때문에 가능하였다. 또한 이들은 자기의 이익에 따라 토지이용을 결정할 수 있었다. 여기에, 정부는 녹색혁명을 조장하였다. 결국 농업체계의 불공정성은 이차 세계대전 이후 토지개혁을 통해 감소되었다.

중앙에 관한 얘기가 매우 다른 것이었다. 여러 나라의 군사적 압박을 통해 중국의 지도자들이 그들의 농업문제를 해결하기를 권장하게 만들었다. 그리고 중국의 지도자들이 '농민들에게 불필요한 고통을 강제하였다. 비록 중국의 지도자들이 정책을 변화하기가 쉽지는 않았지만, 지난 25년 동안, 제도의 개혁을 통해 농민들은 새로운 이익을 얻을 수 있게 되었다.

오늘날 중국의 농업이 직면한 심각한 문제점 중 하나는 공정하고도 효율적인 소유권 분배를 들 수 있는데, 이는 중국 국민과 정부로서는 거대한 도전으로 비쳐질 것임에 틀림없다.

핵심주제어: 동아시아 농업, 가족농, 농기업, 기술혁신