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**TRANSFORMING AGRICULTURE AND THE NATIONAL
ECONOMY IN TAIWAN: LEE TENG-HUI AND THE JOINT
COMMISSION ON RURAL RECONSTRUCTION (JCRR)**

by

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Transforming Agriculture and the National Economy in Taiwan:

Lee Teng-hui and the Joint Commission on Rural Reconstruction (JCRR)¹

Introduction

Long before he became President of the Republic of China (Taiwan), Lee Teng-hui was an agricultural economist. As a graduate student at Cornell from 1965 to 1969, his professors described him as quiet and unassuming, but intellectually ambitious enough to tackle one of the toughest questions in economic development: *How can a poor, agricultural nation produce the capital it needs to industrialize?*

Lee, his advisors at Cornell, and his mentors in Taiwan's main rural development agency (known as the JCRR) essentially agreed on a particular answer to this question -- an answer which gained the special vindication of great success in Taiwan. This paper will describe in brief the intertwined stories of Lee, the JCRR, and this influential insight. While the paper takes a special interest in people connected with Cornell University, and the Department of Agricultural Economics in particular, the story may prove instructive to anybody interested in the institutional details of how ideas in development economics can get translated into accomplishments in a national economy.

¹ I am grateful for careful comments from Professors Randy Barker, Daniel Sisler, and Bernard Stanton on a draft of this paper. I am responsible for all errors and opinions.

Agricultural Capital

At a time when farming was sometimes seen as a “backward” sector of the economy, Lee and his advisors at Cornell and in Taiwan emphasized the central role of agriculture in providing the capital needed for modern economic development. Lee made this point in the first paragraphs of his dissertation.² “Economic development is the process of expanding the economy through increased efficiency in order to raise living standards,” he wrote. “It is dynamic and includes long-run changes in economic structure and the pattern of people’s lives.” This development depends fundamentally on the accumulation of capital -- roughly speaking, the resources and tools used for further economic activity. After considering alternative sources of capital, including aid from foreign governments, Lee argued that countries in the early stages of development should make the most of their own predominant industry. “Agriculture,” he said, “is a great potential contributor to capital formation.”

In his introduction, Lee quoted favorably the textured position on agricultural capital that was put forth by the chair of his dissertation committee, John Mellor:

Although a relative decline of agriculture and growth of the non-agricultural sector is inevitable in development, it does not follow that maximizing the short-run outflow of capital from agriculture will maximize the rate of economic development. Development of agriculture can contribute materially to overall economic development and it requires a major inflow of certain forms of capital.

² T. H. Lee, *Intersectoral Capital Flows in the Economic Development of Taiwan, 1895-1960*, Ph.D. thesis (Ithaca NY: Cornell University, 1968; published Ithaca NY: Cornell University Press, 1971).

This view is a compromise position in a debate during the 1960s between those who felt that on average resources should flow into the agricultural sector and those who believed agriculture should be “squeezed” for its raw materials and then left behind.

While Lee was not the first to articulate this view of agriculture’s role in development, his dissertation provided the most effective evidence on its behalf. With great care, Lee traced the flow of resources into and out of agriculture over a long period of Taiwan’s history, from 1895 to 1960. He described the importance of heavy investments in agriculture, first by the Japanese colonial administration before the Second World War and then especially by the nationalist government on Taiwan after 1949. At the same time, he found that on average resources flowed from agriculture to the rest of the economy through the whole period. Sectoral resource flows had not previously been described with such precision on this large scale in any country, and for this contribution Lee’s dissertation won the highest award from the American Agricultural Economics Association in 1969.

With hindsight, it appears that Taiwan found just the right balance between investing in agriculture and tapping agriculture for development resources, such as food for industrial workers and exports to earn foreign exchange. Since the end of World War II, this island of over 20 million people has become urban, industrialized, and prosperous. Measured in terms of market value, the gross national product rose from \$50 per person in 1952 to over \$8,000 per person in the mid-1990s (in U.S. dollars, not adjusted for inflation). This measure somewhat

overstates real economic growth, because of inflation and because non-market household production was more important in the early years, but real growth was still dramatic by any historical standard. In part because rural development was such a central part of the national development strategy in Taiwan, a comparatively egalitarian distribution of income was maintained throughout this period of growth.

Taiwan's experience contrasts with that of other countries that squeezed agriculture to finance industrial development. "The problem is that so many countries tried to do this so fast that they killed the goose before it could lay the golden egg," comments Erik Thorbecke, a professor of economics at Cornell who became acquainted with Lee while doing research on Taiwan in the 1970s. "Taiwan did something very wise. They said, 'we have to get a surplus from agriculture, but we have to invest in agriculture first.'"³

The Joint Commission on Rural Reconstruction

During the period of Taiwan's greatest structural transformation, this investment in agriculture was guided by the Joint Commission on Rural Reconstruction, which existed from 1948 to 1979.⁴ This unique bi-national agency, jointly sponsored by the United States and the Republic of China, stands at a crossroads in Taiwan's modern economic history. Looking backwards, it is

³ Personal communication.

⁴ The full history of the JCRR can be found in two books: T. H. Shen, *The Sino-American Joint Commission on Rural Reconstruction* (Ithaca NY: Cornell University Press, 1970); and Joseph A. Yager, *Transforming Agriculture in Taiwan -- the Experience of the Joint Commission on Rural Reconstruction* (Ithaca NY: Cornell University Press, 1988).

linked with a long tradition of American and Chinese collaboration in agricultural development, and looking forward, it provided a launching pad for the careers of a number of Taiwan's most important leaders today, including especially Lee Teng-hui.

The JCRR was established in Nanking on the mainland of China in 1948, a year before Communist victories forced the nationalist government to retreat to Taiwan. Nanking was the site of a major agricultural university with a long history of American participation. Many Cornell professors had taught at the university in the years between the world wars.⁵ Although the commission had little time for effective work during its short time on the mainland, it carried with it to Taiwan a strong sense of urgency provoked by its direct experience with the potential political consequences of chronic rural poverty.

Under an agreement between the Truman administration and the nationalist government of Chiang Kai-shek, the commission of three Chinese members and two Americans would oversee U.S. aid to rural areas. The American commissioners both had many years of experience in China: John Earl Baker was a relief official, and Raymond Moyer (M.S. Cornell 1927; Ph.D. Cornell 1941) worked for the U. S. Department of Agriculture in China. The Chinese commissioners, conversely, all had studied in the United States: Y. C. James Yen was the

⁵ This collaboration is described in *The Cornell-Nanking Story* (Ithaca NY: Cornell International Agricultural Development Bulletin 4, April 1964), and in J. Lossing Buck, *The Development of Agricultural Economics at the University of Nanking* (Ithaca NY: Cornell International Agricultural Development Bulletin 25, September 1973).

visionary leader of an internationally famous community development campaign known as the Mass Education Movement; T. H. Shen (Ph.D. Cornell 1929) was a plant breeder and professor at Nanking who had earlier developed an important new variety of wheat; and the chairman, Chiang Monlin, was a university president who was also valued for his good connections with the nationalist government.

All of the commissioners knew at least some of the others, and Shen and Moyer in particular were old friends and former classmates at Cornell. According to Joseph Yager's history of the JCRR,⁶ Shen and Moyer shared a vision of agricultural development:

They wanted to attack the problem of agricultural production directly, rather than indirectly through Yen's program of social improvement. They wanted to work through the government and to improve its effectiveness. They favored projects that would produce results over large areas, rather than a program that concentrated on a few localities. And they wanted to respond to needs defined by farmers, rather than impose reforms conceived by others.

While Yen's ideas were also influential, Yager writes that Shen and Moyer's viewpoint came to dominate early JCRR policy statements. In spite of this internal debate, the commission's work was apparently guided by a strong sense of shared purpose, and all decisions were eventually approved unanimously.

In its most important early achievement, the JCRR helped the government on Taiwan design and carry out a radical land reform from the late 1940s to the early 1950s. In three stages, the reform

⁶ Yager, pp. 16-17.

reduced farm rents, redistributed public lands, and forced landowners to sell excess land to the government, which resold the land at low prices to the farmers who tilled it. These policies helped kick off fifteen years of rapid growth in rural incomes.

The land reform also had important repercussions for the capital transfers that Lee described in his dissertation. Because the government did not have enough money to pay all landowners the market value of their land, it partly compensated them with stock in public enterprises. Not only did this compensation ease the political unrest among the landlords, but it gave them an incentive to support the movement of resources from agriculture to industry. As Shen later recalled, "Only a thoroughgoing program of land reform, such as that carried out on Taiwan in the fifties, could stimulate industrial development."⁷

The years from 1952 to 1967 were a period of accelerated growth, both in agricultural production and exports. During this period, the JCRR financed the development of improved varieties of crops and livestock, and it helped to improve irrigation systems and pest control. Crop production increased 82 percent, even though the total acreage under cultivation increased only three percent, and livestock production almost tripled. While Taiwan exported mainly sugar at the start of this period, it expanded into fruits and vegetables and quickly developed a large food-processing industry.

⁷ Shen, p. 67.

Lee began to work for the JCRR as an economist in 1957, by which time Shen had become the commission's chairman, a position in Taiwan equivalent in rank to the Minister of Agriculture in most countries. According to his official biographical sketch, Lee contributed to the establishment of farmers' associations, irrigation systems, warehousing, health programs, and farm mechanization at the JCRR.⁸ After returning from his three years at Cornell, he was put in charge of the commission's Rural Economy Division in 1970. In a paper that Lee and Shen co-authored in 1974, they reflected on Taiwan's postwar development.⁹

Agricultural development in Taiwan was thus achieved under pressure of scarce land resources and rapid population growth by emphasizing improved technology and land-saving techniques. Despite the priorities given to industrial investment, agricultural output grew faster than population numbers. Thus, agriculture was able to generate the surplus production needed for rapid industrialization.

Turning Points

With hindsight, it appears that Taiwan was concluding a key stage of agricultural development at just about the time Lee was at Cornell. "In the second half of the 1960s," Lee and Shen wrote in their 1974 paper, "agriculture in Taiwan reached a turning point."

Until that time, a critical question was whether any sector of the economy could provide enough employment for Taiwan's population, which grew from about 7.5 million people in 1950 to over

⁸ Lee Teng-hui, *Creating the Future -- Towards a New Era for the Chinese People* (Taipei: Government Information Office, 1992).

⁹ T. H. Lee and T. H. Shen, "Agriculture as a Base for Socio-economic Development," in *Agriculture's Place in the Strategy of Development: The Taiwan Experience*, ed. T. H. Shen (Taipei: Joint Commission on Rural Reconstruction, 1974), p. 293.

20 million today. New technologies were designed to be labor-intensive and land-saving, meaning that they led to greater employment on less land. By the late 1960s, Taiwan's industrial sector was absorbing labor quickly enough to relieve agriculture of its role in creating new jobs. Factories began to pay higher wages, which attracted more people out of agriculture. With a scarcity of workers, wages began to rise even in rural areas. After passing this "turning point," Taiwan's farmers began increasingly to invest in labor-saving machinery like small tractors. Taiwan's agriculture became more similar to the agriculture of a wealthy, industrialized country.

This period was also a turning point for Lee Teng-hui. Three years after returning from the United States, Lee was appointed a minister of state in the cabinet in 1972, with the encouragement of JCRR officials who were active in the Kuomintang, or nationalist party. At the time, that post made him the highest-ranking Taiwanese-born official in the government.

"From 1972 onward," says Randy Barker, a development economist and former Cornell professor who has known Lee since the 1960s,¹⁰ "Lee's rise to political prominence and eventually to the presidency was meteoric." He became mayor of Taipei in 1978 and governor of Taiwan in 1981. In part because the ruling party wanted to show that mainlanders did not have a complete monopoly of top government positions, President Chiang Chung-kuo (Chiang Kai-shek's son) nominated Lee as his running mate in 1984 elections.

¹⁰ Personal communication. Barker is now the director of national and special programs at the International Water and Irrigation Management Institute in Sri Lanka.

Lee became president upon the death of President Chiang in 1988, and was elected in his own right in 1990. While some leaders of the mainlander-dominated Kuomintang opposed Lee, he managed to consolidate his power and continue a program of political liberalization that began under the previous administration. The *Far Eastern Economic Review* pointed out that while the party leadership was suspicious of him at first, Lee has proven himself a valuable asset to the Kuomintang because of his popularity with the Taiwanese majority.¹¹

Although observers credit Lee's training as an economist with contributing to his record as a political leader,¹² the question of capital transfers from agriculture to industry no longer occupies much of his attention. Indeed, the net resource flows Lee described in his dissertation have reversed. Today, instead of "squeezing" farmers to facilitate industrial development, Taiwan subsidizes them much as the United States or European Community does, hoping to close the persistent gap between rural and urban incomes.

Taiwan also has new economic problems to worry about. "As we have entered the last decade of the 20th century," President Lee confessed in a 1992 speech, "we have come to an evident

¹¹ Frank Ching, "A Man for All Seasons," *Far Eastern Economic Review* 157(5) (February 3 1994).

¹² "He may have gained entrance to the corridors of power as a token Taiwanese, but he was chosen because of his qualifications, chief among them the expertise he developed under the tutelage of Mellor and other Cornell professors." James Carman, "Lee Teng-hui -- A Man of the Country," *Cornell Magazine* 98(2) (June 1995).

realization that despite our increasingly prosperous lives,... our society is experiencing the strain of the high growth and its resultant disorder. We are confronting such problems as chaotic traffic congestion, environmental pollution, crime on the increase, and lack of cultural and recreational installations. All this," Lee said with a characteristic willingness to turn his attention squarely toward the next challenge, "has necessitated our full-scale and comprehensive planning for a remedy."¹³

Postscript

For Lee's inauguration in 1990, the Taiwan government invited a delegation from Cornell, including professors Randy Barker, Bernard Stanton, and Daniel Sisler. "I had gone with the idea that I might get to shake his hand," Sisler says, but instead President Lee met with the Cornell group for over an hour at his house on the day of the inauguration ceremony. "While I'm sure very important heads of state were waiting, we talked about Taiwan in the future, and he asked us about stronger relations with mainland China."¹⁴ That same year, Cornell University awarded Lee its first Outstanding International Alumnus citation.

For Lee, these connections are far from merely sentimental. Taiwan and mainland China have never recognized each other politically, and most nations now have formal relations with mainland China instead of Taiwan. Even the United States ended economic aid to Taiwan in

¹³ T. H. Lee, *President Lee Teng Hui's Selected Addresses and Messages 1992* (Taipei: Government Information Office, 1993), p. 26.

¹⁴ Personal communication.

1965 and ended diplomatic recognition in 1979, at about the time that the Joint Commission on Rural Reconstruction ended its work. In this political context, Lee's acquisition of a visa to visit Cornell for his alumni reunion in 1995 was a diplomatic coup, making the People's Republic of China so angry that it temporarily withdrew its ambassador from Washington in protest.

Lee also continues to contribute occasionally to scholarly work in development economics. In his preface to a recent book edited by Mellor, *Agriculture on the Road to Industrialization*, Lee reflected on the "Taiwan Experience." After discussing both the early success of agriculture in supporting industrialization and also more recent problems such as pollution and stagnating farm incomes, Lee concluded, "These are the same problems that other newly industrialized economies face. They cannot be resolved without a clear understanding of the role of agriculture in industrialization."¹⁵

¹⁵ Lee Teng-hui, "Foreword," in *Agriculture on the Road to Industrialization*, ed. John W. Mellor (Baltimore MD: Johns Hopkins University Press, 1995), p. xiv.

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