

Taiwan's Land Reform and Its Economic and Political Implications*

Chao Ching-hsi

I. Introduction

Taiwan is an island and also a province of the Republic of China. Since the mainland has been occupied by the communists, Taiwan is the only place over which our government now has control. For this reason our government has devoted all its energy to developing Taiwan from a backward and colonial stage to a modern and independent one. In the process of development, land reform has been in the past, and even today, considered one of the foremost important economic policies in Taiwan. The reasons may be many, but the most important one is that Taiwan's arable land is insufficient to support the large increase of population, which has come about during recent decades. So ways of improving the tenure system, land distribution, techniques of cultivation and even reclamation of submarginal lands will be considered as the chief constituents of the land reform of Taiwan. Land reform in the early days was a problem of redistribution of land ownership; but now it is really a problem of technical improvement to increase the productivity of land and consequently provide the income needed to support a large increase of farmers who live on limited sized farms.

II. The Background

Before going into details of the land reform adopted by the government of the Republic of China in the past, we need to become a little acquainted with the conditions prevailing in the time before the adoption of the programs of the 37.5% farm rent limitation and the Land to the Tiller, both of which came into realization in the period from 1949 to 1953. In the following table, we can notice that in the first place the amount of arable land in the past few decades has not increased at all. In 1920 (not indicated in the table) the total arable land was 791,363 chia (one chia equals 0.969917 hectare). It increased to 880,479 chia in the period of 1947-49, an increase of 89,116 chia or 11.3%. If we look into the picture more closely, we find that the expansion of the arable land of Taiwan is nearly at a stand-still. In the period from 1939-1949, the increase was only 21,918 chia, or 2%. (The arable land in 1939 was 858,561 chia, while the average in 1947-1949 was 880,479 chia). However, Taiwan's population in the past has increased far more rapidly than anyone could foresee. In the period from 1940-43, the average was 6,335,180; but between the years 1950-52 it increased to 7,852,152; and now (1967) it is already over 13 million, twice as large as that in the period, 1940-43. In view of the rapid growth of population and the scantiness of land, population

pressure is ever present in Taiwan; and this is a problem we must solve before we can bring ourselves to a higher standard of living.

In connection with this limited area of land and large increase of population, a second serious problem arises in Taiwan. In the table, we discover that the distribution of land and, in connection with it, the land tenure system had become a serious problem before the launching of the land rent reduction program in 1949. In 1940-43, there was a total of 448,220 farming families, among which 31.2% were owner farmer families, 31.0%, part-owners and 37.8%, tenants. In 1947-49, the percentage of owners did not change, remaining at 31.8% while tenants increased to 44.0% and part-owners decreased to 24.8%. If we include part-owners in the picture, we immediately realize that in Taiwan before the implementation of the 37.5% farm rent limitation program, at least 70% of the farming families were involved in the problem of tenancy. Or, to say it plainly, nearly 70% of the farming families depended upon landlords, who could, within their jurisdiction, demand the high tribute from the tenants, thus keeping the income of the owners at a most advantageous level. Most economists think that landlords are really monopolists. Of course, this description is somewhat different from the Classical interpretation of monopoly, yet there is no doubt that landlords can get a monopolistic profit from the limited supply of land.

Table I. Cultivated Land, Population, Farm Families, and Farm Size of
Taiwan Before the Implementation of the Land Reform Program

Year	Cultivated Land Unit: Chia	Total Population	Agri. Population	Farm Families			Farm Family Size	Farm Size Unit: Chia
				Owner Farmers	Part- Owner Farmers	Tenant Farmers		
1940-43	881,862	6,335,180	3,128,062		448,220		6.98	1.97
	100.0%	100.0%	100.0%	31.2%	31.0%	37.8%		
1947-49	880,479	4,901,178	3,745,803		639,805		5.95	1.38
	99.8%	108.9%	119.7%	31.8%	24.8%	44.0%		
1950-52	900,628	7,852,152	4,138,739		704,569		5.88	1.27
	102.1%	123.9%	132.3%	35.1%	24.0%	40.9%		

Source: The above table was calculated from the data presented in Hui-sun Tang's *Land Reform in Free China*, pp. 11-13, JCRR, 1954. Tenant farmer families and farm hand families were put together under the heading of tenant farmers.

Now it is time to study the land tenure system of Taiwan. This will help us to better understand why the government in 1949 gave priority to the farm rent reduction program.

Time does not permit me to give you a full description of the land tenure system of Taiwan. The report prepared by the Taiwan Provincial Land Bureau (quoted by Dr. Tang Hui-sun in his "Land Reform in Free China", 1954), indicates that several evil practices were followed prior to the implementation of the reform program, such as high rental rates, rent deposits, no definite period of time for farm leases, no written contracts, but only verbal ones, advanced payment of

rent, and the practice of subletting the rented land. "It was not unusual to find a lease providing for a share of more than 50% of the total harvest for the landowner. The most common practice was lease on a 50—50% basis. A 60% share for the owner and 40% share for the tenant was found in the more fertile and more densely populated areas. The greatest share the owner ever got was in the most fertile area of Taichung and the most densely populated area of Hsinchu where he was entitled to 70% and the tenant only 30% of the total harvest There were also an "iron-clad" rent and a rent on by-products. The former was a fixed rent which the tenant must pay to the owner in spite of any crop failure; it amounted usually to 60% of the crops. Though by-products are the result of additional application of capital and labor on the part of the tenant, he was required by practice to share them equally with the landlord or to pay an extra secondary rent according to the rental rate for the main crop....." This gave the tenant farmers less incentive to improve their lands. Their toil was not for themselves, but for their landlords. Thus the tenants often became discouraged and even began to expropriate their land without mercy. One thing that needs our attention is that since the contracts between the landlords and the tenants were verbal, the position of the tenants was always vulnerable. Their contracts might be suspended at any time. When they were suspended, the tenants were at a disadvantageous position, since there was nothing in their hands with which to protect them against their landlords. It was therefore unwise for a tenant to invest his savings to improve the land, unless these investments were compensated for in case there occurred suspension of the contracts. In view of so many defects in the tenure system of Taiwan before the implementation of the land reform, it was necessary for the government to limit the rental rates and turn the tenanted lands into the hands of the tillers so as to protect the latter from the maltreatment of the landlords.

The third problem we face in Taiwan is not only that of farm size decreasing to the extent that the farm cannot support the family living on it, but also the loss of efficiency which results from too much labor and capital with too little land. The above table indicates that in the period of 1940-43, the average size of a farm was 1.97 chia. In 1950-52, these being the years in-between the reduction program and the land to the tiller program, the average size was 1.27 chia. This condition did not show any sign of improvement even though the land reform came to the last phase as indicated in the time schedule. On the contrary, the average size was reduced to 1.14 hectares in the period of 1956-60 and then to 1.05 hectares in 1965. If we compare this with the United States, we shall find, as remarked by Mr. Gerald H. Huffman, Commissioner of JCRR in 1964, that in the United States farms range in size from four hectares to well over 400 hectares and the average size is over 60 hectares. Of course, we have no way of enlarging our farm size at one stroke; yet it is a problem for the planners of economic policies to see how labor and capital can be efficiently applied in such a limited size of farms. This is why we, in addition to redistribution of land ownership, are concerned with the intensive use of land, reclamation of submarginal land, consolidation of land, the purpose of all of which is to increase the productivity of land needed to support a rapid increase in population.

III. Implementation of the 37.5% Farm Rent Limitation and the Land to the Tiller Programs

Now we come to the implementation of the land reforms carried out by the government in 1949-53 with the purpose of stabilizing rural conditions, ensuring a better social order and providing a permanent solution to Taiwan land problems. There will be no more disputes between landlords and tenants, since all tenanted lands will in the end be turned into the hands of the tillers. Since land has now become closely related to the tillers, there will be no more deterioration of land productivity through exploitation.

I think I should be excused for not giving you a complete account of the land reform carried out by the Provincial Government of Taiwan under the supervision of the Central Government. It would take too much time to acquaint you with the procedures involved in formulating these acts and laws. It is not necessary to go into these details, since the purpose of this speech is simply to help you to understand the nature of the land problem of Taiwan with the ways used to solve it. For these reasons, I shall give you an outline consisting of the following points: namely, time, legal statute, contents of the programs, and achievements. I hope this outline will give you a glimpse of what the Government has done in the past to help the tenants to own their lands, so as to keep them from the maltreatment of the landlords.

A. *The 37.5% Farm Rent Limitation Program:*

a. *Time of completion and the legal statute:* This program was started in April 1949 under the Regulations Governing the Lease of Private Farm Land in Taiwan Province, together with the detailed rules governing the applications of these Regulations. Finally a law known as the Farm Rent Reduction to 37.5 Per Cent Act was passed by the Legislative Yuan on May 25, and promulgated by Presidential Decree on June 7, 1951.

b. *Contents of the Program:*

i. The amount of farm rent shall not exceed 37.5% of the total annual yield of the principal product of the main crop. If the rent originally agreed upon exceeds 37.5%, it shall be reduced to 37.5%; and if it is less than 37.5% it shall not be increased.

ii. The period for which any farm land is leased shall not be shorter than six years. If the period originally agreed upon is longer than six years, it shall remain unchanged.

iii. All farm lease contracts shall be made in writing.

iv. When the farm land is returned to the lessor on the termination of the lease contract, he shall repay to the lessee the cost of that part of the improvements which has not yet lost its utility.

v. The lessor shall not collect the farm rent in advance or demand any security deposit.

vi. If the lessee has failed to pay the farm rent for two years, the farm lease contract shall be terminated.

c. *Achievements:* By the end of 1949, we find that 296,043 farm families had signed farm lease contracts; 377,364 farm lease contracts had been signed (a farm family might possess more than one plot of land belonging to different owners); and 264,514 chia of farm land had been

leased under this act. In that year, the total area of private farm land in Taiwan excluding Penghu Hsien, was 693,213 chia (or 672,359 hectares) among which 38% or 264,514 chia was under the control of this act.

B. *The "Sale of Public Land Program"*: So-called public lands are those lands transferred from the Japanese subjects to the national government of China, when Japan surrendered in 1945. In 1952, the census indicated that there was a total of 181,490 chia being held under the control of governments of different levels and publicly owned corporations, such as the Taiwan Sugar Corporation, etc. These lands are mostly in the southern part of Taiwan.

a. *Time of completion and the legal statute*: In the beginning only leasing was applied under the Regulations Governing the Lease of Public Lands in Taiwan Province and Rules Governing the Application of these Regulations, promulgated in 1946. Beginning in 1948, public farm lands were sold; but that action was finally authorized under the Regulations Governing the Implementation of the Sale of Public Lands to Help Establish Owner-Farmers in Taiwan, drawn up by the Provincial Government and finally approved by the Legislative Yuan on June 4, 1951.

b. *Contents of the Program*:

i. The public lands were to be sold chiefly to their present tenant cultivators.

ii. The amount of public land permitted to be purchased depends upon (1) the farmer's financial status, (2) the area of public land available for sale, and (3) the number of the farming population. The amount thus prescribed was 0.5 to 2 chia of paddy field or 1 to 4 chia of dry land.

iii. The price of the public land was fixed at 2.5 times the total annual main crop to be paid in 20 equal installments in ten years.

iv. The price was to be paid in terms of farm products.

c. *Achievements*: Of the 106,959 chia of public land leased to tenant farmers for cultivation (the total area of public land was 181,490 chia), 90,574 chia or 84.7% were offered for sale. Of those 90,574 chia offered for sale, only 63,000 chia or 69.5% were actually sold to farmer purchasers and the remaining 27,574 chia or 30.5% were struck off, because some of them had been washed away by flood.

The farming families that had purchased public land reached a total of 121,953, constituting 26.7% of the average number of farming families of tenant farmers, part-owner farmers, and farm hands, and 17.3% of the average number of all farming families in Taiwan for the three-year period, 1950-52 inclusive.

C. *The Land to the Tiller Program*:

a. *Time of completion and the legal statute*: The Land to the Tiller Act was passed by the Legislative Yuan on January 21, 1953 and promulgated by Presidential Decree on the 26th of the same month. The preparatory work, such as the compilation of the land records and the land ownership cards, was started one year earlier. Purchases and sales were executed simultaneously and completed in the year when the Act was promulgated.

b. *Contents of the Program*:

i. The tenanted cultivated land of the categories indicated in the Act shall be purchased by the government for resale to the present tiller or tillers. The accessories of a farm are includ-

ed.

ii. Each landowner who has rented his land shall be permitted to retain three chia of paddy field of the 7th to the 12th grade, or the equivalent of dry land.

iii. The purchase price of the land shall be 2.5 times the amount of its annual main crop yield for the respective land grades.

iv. The purchase price of the land shall be paid, 70% in land bonds in kind and 30% in Government enterprise stock shares.

v. Those lands purchased by the Government shall be resold to the present tillers. The accessories shall be resold to them also.

vi. The price of land resold by the Government to the tillers was to be the same as that paid to the landlords. It was to be paid by the farmer purchasers in 20 equal installments spread over ten years beginning from the day of the purchase.

c. *Achievements*: At first it was estimated that there were 215,000 chia out of the total 256,000 chia, subject to compulsory purchase by the Government, to be resold to about 300,000 families of farmer purchasers.

When the program was completed, 143,567 chia (139,249 hectares) were purchased from 106,049 landlords and resold to 194,823 tenant families. Before the program, some bargaining had already taken place between the tenants and the landlords. If we include these purchases, the total purchases by the tenant farmers would amount to 195,295 chia (154,516 hectares) or 62% of the total tenanted area. In this way the owner-cultivated land has increased from 418,463 chia (405,913 hectares), or 61% of all the private lands to 577,677 chia (560,338 hectares) or 84.8%; while the tenant cultivated land decreased from 262,629 chia (254,750 hectares) or 38.6% to 103,427 chia (100,325 hectares) or 15.2%. Also the percentage of tenant families has decreased from 55.0% before the implementation of the Act to 26.4%*. This shows clearly that the purpose of the Land to the Tiller program to stabilize rural conditions through the ownership of the land by the tillers has been realized.

From the above we are impressed by the fact that the Government in the past and even today has attempted to realize the goal: land to the tiller. Only when lands are owned by the tillers, will social unrest be quieted and agricultural production be enhanced. This is because the distinction between landlords and tenants will never again exist and, furthermore, more incentive will be given to the tillers who can reap all that they have invested. Hence cultivators will be relieved of the tensions caused by the necessity of sharing their profits with their landlords. So when the Farm Rent Limitation and the Land to the Tiller programs were carried out, all tenant farmers applauded. Furthermore, the price of the land resold was very reasonable, being only 2.5 times the annual yields of the main crops. I think the price was too cheap, due to the fact that at that time the interest rate was very high so as to make the recapitalized value of land a little lower. Also the price of the land was to be paid back by 20 equal installments spread over 10 years. Each installment was not higher than the amount one tenant should pay to his landlord, i.e., 37.5% of his main crop yield. So it is plain to see that all these regulations have the same purpose: that of encouraging tenants to become owners with no extra burden upon them.

* JCR Annual Reports on Land Reform in the Republic of China, from October 1948 to June 1964, pp. 79-80, JCR, Taiwan, 1965.

Under such favorable conditions to the tenant farmers, this Land to the Tiller program was very successful, so far as the ownership of land is concerned. As mentioned above, the tenanted land before the implementation of the program constituted about 38.6% of the total private arable land, but now it was reduced to 15.2%. The owner farmers before the implementation of the program constituted only 33% (1948), but now constituted more than 68%. (In 1965, according to the Taiwan Agricultural Year Book, the total number of farm families was 834,827, among which 555,093 families are owner-cultivators, 171,988 are part-owner cultivators and 107,746 are tenants. In other words, part-owners and tenants in total still constituted 33%.) In other words, the percentage of tenants was reduced from 70% to 30% (part-owners were included). The above indicates that what we have achieved is still far from our goal of turning all of the tenanted lands into the hands of the tillers. We still need further efforts to reach the goal.

However, here is a question that deserves our attention. Is the Land to the Tiller program really the only way to solve the agricultural problem of Taiwan? What other things need our consideration in solving this problem? I think that the Land to the Tiller program is quite necessary especially at a time when communist propagandas and disturbances are prevailing. We cannot escape from their attacks on the landlords and the government. Therefore it is necessary for the government to redistribute the ownership of land so as to avoid social disturbances. This is what the national government has attempted to do in the past; and we find that it has been quite successful, even though there are still many farmers who must depend upon their landlords. (At least 30% of the farmers have connections with their landlords). Some would argue that the tenure system is not necessarily harmful to an economy in which the owners (especially those arising from their tenant position) do not have enough capital and land to invest and till. I shall not at this moment argue this point. As I have said before this is a time of social unrest; we should get rid of its causes as completely as we can. However, I cannot think that the Land to the Tiller program is the only solution to solve the agricultural problem of Taiwan. Taiwan's agricultural problem is to find a way to dispose of a large supply of farm labor. If we look into the following data we cannot escape the conclusion that farm sizes have become so small that they can hardly support an increase in the supply of farm labor.

Table II. Total Cultivated Area and Size of Individual Farms of Taiwan

Year	Total Cultivated Area	Farm Families	Land per farm	Agricultural Population	Land per Agri. Population
*1940-43 (Average)	881,862 Chia (=855456 ha.)	448,220	1.97 Chia (=1.91 ha.)	3,128,262	0.28 Chia (=0.27 ha.)
*1947-49 (Average)	880,479 Chia (=854065 ha.)	639,805	1.38 Chia (=1.34 ha.)	3,785,803	0.24 Chia (=0.23 ha.)
*1950-52 (Average)	900,628 Chia (=873609 ha.)	704,569	1.27 Chia (=1.23 ha.)	4,138,739	0.22 Chia (=0.21 ha.)
**1956	875791 ha.	746,318	1.17 ha.	4,698,532	0.19 ha.
**1957	823263 ha.	759,234	1.15 ha.	4,790,084	0.18 ha.

Continued:

Year	Total Cultivated Area	Farm Families	Land per farm	Agricultural Population	Land per Agri. Population
**1958	883,466 ha.	769,925	1.15 ha.	4,880,901	0.18 ha.
**1959	877,740 ha.	780,402	1.12 ha.	4,915,233	0.18 ha.
**1960	869,223 ha.	785,592	1.11 ha.	5,373,375	0.18 ha.
**1961	871,759 ha.	900,830	1.09 ha.	5,467,445	0.16 ha.
**1962	871,858 ha.	809,917	1.08 ha.	5,530,832	0.16 ha.
**1963	872,208 ha.	824,510	1.06 ha.	5,611,356	0.16 ha.
**1964	882,239 ha.	834,827	1.06 ha.	5,646,032	0.16 ha.
**1965	889,563 ha.	847,242	1.05 ha.	5,738,503	0.16 ha.

Source: *The part, 1940-1952, was calculated from the data presented in Hui-sun Tang's *Land Reform in Free China*, pp. 11-13.

**The part, 1956-1965, was calculated from the data presented in *Statistical Abstract of the Republic of China, 1966*, pp. 124-125, Directorate General of Budgets, Accounts, and Statistics, Executive Yuan, Republic of China.

Before the implementation of the land reform, the average size of a farm was 1.97 chia (1.91 hectares) in the period of 1940-43, and then was reduced to 1.38 chia (1.34 hectares) in 1947-49. It showed a little improvement in the 1950-53 period, just before the implementation of the program of the Land to the Tiller. After the implementation, the average size of a farm became smaller, being only 1.17 hectares in 1956. It was reduced to 1.05 hectares in 1965. This is simply because in the former days, there were some large land owners and some part-owners. They wanted to keep their farms as large as possible by hiring more farm labor to make their investment more profitable. But now all owners and part-owners are subject to the regulations governing the purchase of the excess tenanted land by the government for the sake of reselling it to the tenants who till the land. Farm sizes will become smaller and smaller as more tenants purchase the land. However some would argue that this program has in some way helped the small farm families to enlarge their farms by purchasing lands from their landlords. JCRR's Annual Report on Land Reform in the Republic of China, from October 1948 to June 1964, states that 194,823 tenant families acquired 143,567.7683 hectares of land from the landlords. If we add them to their original property (the original one from the calculation might be 63,470.3349 hectares), present property will reach the amount of 206,038.1032 hectares. Even though the total property has been increased, the size of the farm does not show any significant change. More than 60% of farms are still within one hectare. We are quite proud to say that at present the concentration of farm land no longer prevails in Taiwan, yet so far we have no better means of enlarging the size of our farms. This problem will become more serious as time goes on. This size is too small to support a family of 5 to 6 persons and it also makes for inefficient farm management. So we must seek ways to solve this serious problem.

IV. Intensive Cultivation, Land Consolidation, Reclamation of Submarginal Land And Supply of Farm Credits Will Somehow Solve the Agricultural Problem of Taiwan.

Before going into ways of improvement, we must pause a moment to ask the question: What is the optimum size of a farm, just as we usually ask what is the optimum scale of a firm? The optimum size of a farm depends upon the availability of man-power and capital of the farm in consideration. If the supply of man-power and capital is abundant, the size of the farm should be large; otherwise there will be inefficiency in utilizing these resources. Since the supply of man-power in Taiwan is plentiful, and since the supply of capital is increasing day by day through the increase in income, we must enlarge our farms in order to keep pace with the increase in the supply of man-power and capital. There is still no definite answer as to the size of a farm. This is determined by various factors, such as the cost of production, the price of the farm products, technic and ways of management. According to the report worked out by the Research Department of the Taiwan Provincial Land Bank (a summary drawn up by Mr. Yu Feng-tsiang was published in Taiwan Land Finance Quarterly, No. 10, pp. 85-112), in considering the optimum size of a farm, quality of land, capital (running capital), man-power, animal power, and agricultural products should be considered. In the conclusion, it says that in I-lan the optimum size should be 2.2443 hectares, Taipei Hsien, 1.7065 hectares, Tao-yuan Hsien, 2.8846 hectares, Chang-Hua Hsien, 2.9421 hectares, Yuin-lin Hsien, 4.7158 hectares, Tainan Hsien 3.1000 hectares, Pingtung Hsien, 2.5591 hectares, Taitung Hsien, 4.5230 hectares, and Hua-Lien Hsien, 2.9801 hectares. The variations in size depend upon the availability of man-power, animal power, and capital of a farm; but as a whole, there is no question but that the size should be over 3.0873 that is the average of the above data in order that all the man-power, animal power and capital can be wholly utilized without any waste. (The reviewer says that the method used in this research is still subject to criticism, but this is not a question that I wish to go into here.) So we cannot but say that the Land to the Tiller program has placed more emphasis on political factors than on economic ones. More owners have sprung up under this kind of policy, yet the size of the farms is too small to be efficient. Let me say again that the tenure system is not necessarily a bad system, because the tenants, especially those of part-owners, have more labor and capital, but less land. If they could lease more land from the landlords, there would be more efficiency in their farm management. This is quite common in many countries where land is scarce, while man-power is plentiful. I say again I am not going to argue about this land policy. It is determined by the government. It is more political than economic. Of course, many people have pointed out the tenant farmers are becoming more prosperous. They argue that this prosperity should be attributed to the success of the Land to the Tiller policy. I have no objection to their arguments, because they have been borne out by the facts, yet I should like to point out one thing: this prosperity cannot be entirely attributed to this program. There are many other factors, such as the stability of the farm prices, a little protection for rice producers, the introduction of new varieties, the heavy application of fertilizers (we need to check whether or not we have applied too much fertilizer), etc. I believe incentive or self-interest is the

starting point of a business, not only in industry, but also in farming; yet for the sake of keeping our agricultural production efficient, the size of a farm should not be neglected in the land reform program. Now the facts indicate that farms become smaller and smaller, because most tenanted land in excess of the retention rate must be purchased by the government and resold to the present tenants. This reduces the size of a farm from an optimum size to a less efficient one.

In view of the fact that smaller farms are less efficient, the farmers and the government have worked together to improve farming by means of intensive cultivation and consolidation of scattered plots into a workable unit. In the meantime, the government again supplies farm credit to help farmers to install necessary implements for planting purposes and also introduce new varieties of seeds to increase yields.

So-called intensive cultivation means that farmers put more labor on a unit of land in order to get greater return from it. This is quite common in a country where the owner farmer system is predominant, because under this system, all the income from the land belongs to the owner-farmers. Since in Taiwan the owner-farmer system is becoming predominant, it will be more beneficial to the farmers, if they use more of their existing labor on their limited sized farms. According to Dr. S. C. Hsieh and Mr. T. H. Lee in their paper, "The Effect of Population Pressure and Seasoned Labor Surplus on the Pattern and Intensity of Agriculture in Taiwan", farmers in Taiwan have already adopted two or three kinds of crop systems in combination on a farm. "In the past fifty years, the arable land in Taiwan has increased by 26% while the agricultural population has accelerated its growth by 125% and farm labor force by 50%. With the rapid increase of agricultural population there follows the decline of the percentage of farm labor force in total agricultural population from 50% to 30% and the decrease in average cultivated area per capita agricultural population from 0.31 hectare to 0.18 hectare. Prior to 1935, the increase of cultivated land was made possible through the first expansion of newly reclaimed land. However, since 1940, the population pressure has been rapidly growing and the only possible measure to meet the changing situation is to make intensive use of the land as well as to multiple crop planting in a given area."* The multiple crop index which is used to measure the degree of the utilization of land indicates that in 1911-15, it was 116%, which means that the crop area is greater than the cultivated area by 16%. In 1931-35 it came to 132%; in 1946-50, it rose to 151%. In 1955-60, it increased to 180%. This shows that all the crop area is nearly twice as great as the cultivated area. Thus more labor will be used on a unit of land. The paper says again that "the labor input for each hectare of cultivated land has been increased from 195 days in 1911-15 to 220 days in 1933-35, and further increased to 305 days in 1956-60. So there will be more utilization of farm labor when the intensive cultivation is adopted. However, the degree of intensive cultivation still depends upon (1) the natural environment, such as climate, soil, and topography, (2) the size of the cultivated land, farm labor force and number of livestock on the farm, and (3) farm implements and other equipment. For these reasons the cultivation in Changhua is the most intensive one of all, whose multiple crop index is 233. The next one is Taichung, whose index is 232, so close to Changhua that there is no difference between them. The reason for their high multiple crop index is simply

*S. C. Hsieh and T. H. Lee, "The Effect of Population Pressure and Seasoned Labor Surplus on the Pattern and Intensity of Agriculture in Taiwan", *Industry of Free China*, Vol. XXIII, No. 1, pp. 6-7, January 1965.

that most of the land in these two places is well irrigated. The ratio between the irrigated area and the whole area is 83.70% in Taichung & 78.35% in Changhua. So we can see that the multiple crop system is the way to solve the problem of surplus farm labor and also to increase farm income to keep farms intact.

Another way to solve the problem of inadequate farm sizes is the consolidation of scattered plots into a perfect workable unit, which not only can save working time and running expenses in managing a farm, but also can provide more water ways and road spaces between adjacent farms. Before going into details of the consolidation of the lands, we must understand the background, i. e., why our lands are not consolidated in the locality where the farmers live; on the contrary, they are scattered in different localities. Reasons may be many, but the most important one is that farmers are mostly tenant farmers. They lease lands from different owners. When they turn themselves into owners under the Land to the Tiller program, their lands remain in their original places. So their plots are scattered in different localities. Again we may wonder why there are so many plots with only 0.05 hectare or even less. This might result from inheritance of a property from parents. A parent usually apportions his property equally among his children, thus breaking a piece of land into many plots. Since a farm is composed of many small-sized plots scattered in different localities, it is of course not convenient for a farmer to manage his farm and also it is not adaptable to the use of modern implements. Channels are not well constructed. Roads are too narrow to carry voluminous organic composts from place to place. So the government, in view of these defects, has since 1960 carried out the program of consolidation of land and designated Lung Ching, just west of Tunghai, across the hill, as the demonstration center to consolidate the lands according to the plans set up by the government. According to the 10-year long-term program, more than 300,000 hectares have been set up for this consolidating work. Beginning in 1960 there have been consolidated a total of 302 districts, 114,251 hectares. In Taichung, where we live, more than 10,230 hectares have been consolidated. If we look into the picture more deeply, we shall find the following results, all of which will give benefits to the farmers who have consolidated their lands. (1) There is an increase of 5.4% of land available for planting because of this consolidation. (2) There is an increase of 40% of lands centered in the place where farmers live and work. (3) The number of plots has been reduced to less than 40% of the original number. (4) There is an increase of more than 70% of plots receiving direct irrigation and direct draining facilities. Therefore much labor will be saved. As indicated in the following figures, before the consolidation, 140 man days were required for one crop for one hectare, but now only 109 days are required, thus saving 31 days or 22%. Also the yield is increasing with a result of 13% increase of sugar cane, 50% increase of cruciferae crops in Lung Ching, and also an increase of 32% of rice in Yui-n-lin, Chang-hua and Taichung. All these increases are attributed to good irrigation and easier application of fertilizers. Furthermore, since the lands are consolidated, labor of transportation is saved, thus there is more time for the farmers to work at other jobs.

Farm credit has increased in the last few years, which shows that the government through the Land Bank of Taiwan and also other commercial banks, cooperatives, and farmers' associations, has paid heed to the importance of farm credit. In July 1962, the total outstanding loans of all banks (cooperatives and farmers' associations are excluded) amounted to NT\$ 1,589,967,000

constituting 11% of the total outstanding loans of all banks, but in April of 1967, they came to NT\$ 3,742,525,000 constituting again of 12%. Though the percentage of farm credit did not show any change, the amount has increased 200%. In the loans are included loans for crop and livestock production, capital investment, irrigation construction, and land reclamation and land improvement. In a word, the land bank and commercial banks all have the same motive: to improve land productivity to keep Taiwan's agricultural production at a high level not only to support a large increase in population but also to absorb a large supply of farm surplus labor. Of course, the government has already been concerned with accelerating the development of industry in the hope of absorbing more labor from the farms. Every year there is an increase of 2.6% of farm labor, but the farm itself can only absorb 1%, i. e., the rest must be absorbed by other enterprises. We must use different ways, such as intensive cultivation, consolidation of farm lands, reclamation of submarginal land, and extension of farm credits—all of which are directed toward increasing opportunities of work to absorb the surplus labor from the farms.

v. Conclusion

In conclusion, I should like to point out that the land reform adopted by the Government can only solve the problem of land ownership, which is of course one of the factors which may cause political unrest, especially in a place so close to the communists. But it cannot solve the problem of economic efficiency in running a farm. Our farms are too small to absorb all the excess supply of labor and capital, the latter of which is gradually increasing through increase of income. Though we are all aware that our farms are too small, it is not possible for us to increase our arable land. On the contrary, most well irrigated and fertile lands have been turned into sites of industrial plants. This makes the supply of land more serious. Farmers and the Government have worked together to increase their crop areas so as to cause their farms to be more intensively utilized. Of course, this will increase the cost of production, as more fertilizers will be applied. In addition, the government has also helped farmers to consolidate their scattered land into workable units so as to reduce cost of transportation and provide for better irrigation and drainage. The tidal land along the west coast of Taiwan has been made ready for reclamation. In a word, Taiwan's land reform is not a problem of distribution, but a question of utilization. We hope our industry will some day be able to help relieve the tension of increasing farm population.

Appendix:

Here is the translation of a letter from my student, Miss Lin Tsu-chiang, who graduated from the Department of Economics, Tunghai University, in 1966 and is now working as the manager of the Farmers's Association of Mi-tu District of Kao-hsiung Hsien. This letter, in response to my enquiry about the development of the land reform in Taiwan and its consequences, gives a good description of the reactions of the landlords to the Land-to-the-Tiller Program and also of the improvement of the livelihood of those owners who have been tenants and now have become owners or part-owners.

I. (a) Although the landlords did show some dissatisfaction toward the 37.5% Farm Rent Limitation Program, which was carried out in 1949, all the evil practices in the tenure system were swept away at one stroke. The rent rate in the period of the Japanese occupation was fixed at the ratio of 6:4, i. e., the landlords would receive 60% of the main crop, while the tenants only 40%, or a ratio of 5:5, i. e., the landlord and the tenant would each receive one-half of the crop. In addition, there was a fixed rent, known as the "ironclad" rent, i. e., a fixed amount of rent in terms of farm products must be paid to the landlords, no matter whether there was or there was not a yield. Under the present system, the farm rent has been reduced to 37.5% of the main crop. This brings the landlords to a disadvantageous position. Further than this, since all the tenanted lands cannot be called back for their own cultivation, the landlords will unquestionably suffer more, as time goes on. So there arose objections from the landlords. But these objections were finally overcome because of the uncompromising attitude of the government.

(b) In 1953, the Land-to-the-Tiller program was carried out with the purpose of turning these tenanted lands into the hands of the tillers. At that time the tillers or the tenanted farmers, having already reaped a large profit from the 37.5% Farm Rent Limitation Program could easily purchase these lands, while the landlords in view of the hard times before them, were willing to sell out their lands before the execution of the Land-to-the-Tiller Program. In this way they could at least get some capital for their new investment. Therefore, before the implementation of the Land-to-the-Tiller Program, half of the tenants had already purchased their lands from the landlords. So we see that this time the landlords' attitude toward the land reform was quite different from that at the time when the farm rent limitation was launched. This does not mean that the landlords were in favor of this Land-to-the-Tiller Program; it does mean that they had no choice but to accept this program and dispose of their lands as soon as possible.

II. After the implementation of the 37.5% farm rent limitation, the income of the landlords became much less. It was decreased to one-half of what it had been in the former days. This again put the landlords in a less advantageous position, as they had to pay land tax, income tax, and other expenses which reduced their income to a negligible sum. Therefore, the landlords had no choice but to sell their lands, in order to get some cash for their new investment.

III. In 1953 when the Regulations Governing the Land-to-the-Tiller Act were promulgated in which the price of the land purchased by the Government would be paid in 20 installments and also in land bonds and government enterprises' stock shares, the landlords became rather anxious. It seemed to them that this kind of payment would simply "eat" away what they had owned. So they decided to sell out their properties before the execution of the Regulations. In order to make the sale more attractive, the land was priced at one half of the prevailing rate. The tenant farmers, in view of the cheapness of the land, and also realizing that was the easier way to acquire the lands, were willing to purchase these tenanted lands, which were subject to the regulations of the Land-to-the-Tiller program. As a result, a large part of the tenanted lands were sold before the program was under way.

The regulation regarding retention land was passed in order to prevent the situation of the landlords from becoming worse. It provided that all landlords could retain 3 chia of tenanted paddy land or the equivalent of dry land under their own cultivation. This retention was only

applicable to individual owners, not to co-owners or public institutions, such as temples and other social welfare organizations. This kind of discrimination made the tenants rather dissatisfied, because these tenants who rented lands from the individual owners were not permitted to purchase the land, if it was within the limit of the retained; while those who rented lands from public organizations, could purchase them without any restriction. Those who had purchased the land could become more prosperous; while those who were restricted by these regulations could not turn themselves into owners and improve their living condition.

V. Since the implementation of the Land-to-the-Tiller Program, landlords have already changed their outlook, not depending too much on their land. Having realized that they cannot terminate their contracts and take back the lands from their tenants, they have no choice but to sell out their retained land in order to have some money for their new investment. Furthermore, the farm rent is too low for a farm family to live upon. So finally most landlords have abandoned their farming business and turned to other lines of work.

VI. Those tenant farmers who have obtained their lands through the aid of this Land-to-the-Tiller Program have begun to devote all their efforts to developing their farms with more capital, technical improvements, new varieties of seeds to increase their incomes. In this way more children can receive a better education and farmers in Taiwan can enjoy better rural conditions from now on.

*This lecture was delivered at the South-east Asia International Study Seminar sponsored by the University Christian Movement of the United States and composed of 35 university professors, postgraduates, and undergraduates of different universities and colleges of the United States, Japan, Indonesia, etc., who came to Taiwan and stayed at Sun Moon Lake on August 21, 1967. The speaker wishes to express his thanks to Professors Y. T. Wang and T. C. Chen and a Tunghai graduate, Miss T. C. Lin, for their supplying of materials and information. He again wishes to express his indebtedness to Dr. and Mrs. J. Oliver Collins for their reading of the manuscript. All the views expressed here are the speaker's own.

TAIWAN'S LAND REFORM AND ITS ECONOMIC
AND POLITICAL IMPLICATIONS*Chao Ching-hsi*

1. This was a lecture given to the South-east Asia International Study Seminar sponsored by the University Christian Movement of the United States and composed of 35 university professors, postgraduates, and undergraduates of different universities and colleges of the United States, Japan, Indonesia, etc., who came to Taiwan and stayed at Sun Moon Lake on August 21, 1967.
2. This lecture was composed of three parts: (1) the background, (2) the implementation of the 37.5% Farm Rent Limitation and the Land-to-the-Tillers Programs, and (3) the way to solve the agricultural problem of Taiwan.
3. The conclusion of the lecture pointed out that the land reform adopted in Taiwan by the government of the Republic of China can only solve the problem of land ownership. It cannot solve the problem of economic efficiency in running a farm. Our farms are too small to absorb all the excess supply of labor and capital. The latter is gradually increasing through the increase of income. Farmers and the Government have already worked together to solve this problem by way of increasing their crop areas, so as to cause their farms to be more intensively utilized. In addition to this, the Government has extended a considerable sum in farm credits to help farmers to install farm equipment and, in the meantime, helped them to consolidate their scattered lands into workable units, so as to reduce cost of transportation and provide for better irrigation and drainage. The tidal land along the west coast of Taiwan has been made ready for reclamation. Furthermore, we also hope our industry will some day be able to help relieve the tension of increasing farm population.

臺灣省之土地改革在經濟上及政治上之意義

趙 經 義

- 一、本文為一講稿，乃對美國各大學基督徒所組成之東南亞國際問題之研究討論班所準備者。
- 二、討論班中共有三十五位大學教授，研究生，及大學生，來自美國各大學，亦有來自日本及印尼等國。於民國五十六年八月二十日抵達臺灣，二十一日在日月潭舉行討論會，當時所選之題目，即為上述之臺灣省之土地改革問題。
- 三、本講稿共分三段：(一)背景，(二)三七五減租及耕者有其田之改革方案，(三)如何解決臺灣之農業問題，尤其注意農村中之過剩人口問題。
- 四、在結論中，主講者認為臺灣之土地改革僅能解決土地之所有權問題，而並不能解決農業經營上之效率問題。臺灣農場面積太小，乃為我所熟悉者。此次土地改革僅在所有權上加以調整，而對於農場面積非惟未見改進，反而因實施耕者有其地之政策，益見縮小，使農場上之人力與資本無法全部利用。目前政府與農民有鑒於此，乃儘量擴充作物面積，使有限之土地得到更為充分之利用。同時，政府亦增加農貸，並協助農民重劃土地，使耕作更為有效。但臺灣農村中之過剩人口仍有賴臺灣之工業發達後，始可使此問題得以解決。