

AN ABSTRACT OF THE THESIS OF

Tao-Chung Yang for the M.S. in Agricultural Economics
(Name) (Degree) (Major)

Date thesis is presented June 29, 1965

Title ECONOMIC ASPECTS OF AGRICULTURAL LAND REFORM

ON THE ISLAND OF TAIWAN

Abstract approved Signature redacted for privacy.
(Major professor)

Beginning with 1949, Taiwan carried out a series of land reforms which have now been mostly completed.

When the island was returned to China in 1945, tenancy was a serious problem as it was on the China mainland. Nearly half of its farm land was under tenancy and some tenants paid to landlords as much as 70 percent of their annual crop as rent and had no security of tenure. Their income was extremely low and their life difficult.

The land reform program was carried out in three phases. The first phase was carried out in 1949. The program compulsorily reduced farm rental rates in Taiwan from an average of 50 percent to a uniform rate of 37.5 percent of the annual crop yield. Many tenant families were benefited. The second phase began in 1952. By the end of 1961, 94,000 hectares of public owned land had been sold by the Government to poor farmers at a price of 2.5 times its annual crop yield. Under this program 165,443 tenant families had acquired

land ownership by the end of 1961. The third phase was started in 1953. The Government started to purchase all private land holdings exceeding three hectares of paddy field for resale to their tenant cultivators. The tenant purchasers paid 2.5 times the annual crop yield to the Government in twenty semi-annual installments over a period of ten years. By the end of 1961, 139,249 hectares, or nearly 60 percent of the total private tenanted lands were purchased by the Government and resold to tenant families who have thus become independent owner-operators.

The land reform program has helped improve the general social and economic conditions in Taiwan. The most important and significant results are increased food production and improvement in farmers' livelihood.

Although the program has contributed significantly to rural security and economic development in Taiwan, there remain some difficult problems to which some effective answers must be found.

The tasks include: (1) protection of new owner-farmers; (2) exchange and consolidation of small plots of land; (3) promotion of farmers' savings; (4) more intensive farming; (5) industrialization and curbing the growing population; (6) abandonment of a passive and conservative concept; (7) creation of commercial farms; (8) maintaining a stable and growing economy after the end of American economic aid.

ECONOMIC ASPECTS OF AGRICULTURAL
LAND REFORM ON THE ISLAND
OF TAIWAN

by

TAO-CHUNG YANG

A THESIS

submitted to

OREGON STATE UNIVERSITY

in partial fulfillment of
the requirements for the
degree of

MASTER OF SCIENCE

June 1966

APPROVED:

Signature redacted for privacy.

Professor of Agricultural Economics
In Charge of Major

Signature redacted for privacy.

Head of Department of Agricultural Economics

Signature redacted for privacy.

Dean of Graduate School

Date thesis is presented

June 29, 1965

Typed by Susan Carroll

ACKNOWLEDGMENTS

The writer wishes to express his sincere appreciation and gratitude to Professor Dwight Curtis Mumford for his cordial guidance and continual encouragement throughout the writer's Master's program and this study.

Sincere appreciation is extended to my teachers in the Departments of Agricultural Economics and Economics, Oregon State University, for their part in making my study in the United States a success.

Special thanks are due to Miss T. C. Kiang of Central Trust Company, Mr. H. F. Pan of the Executive Yuan, and Mr. T. C. Sheng of Sino-American Joint Commission on Rural Reconstruction, Taipei, Taiwan, Republic of China, for their assistance in collecting the data.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
II. GENERAL SURVEY OF TAIWAN.	4
III. PROBLEMS EXISTING BEFORE LAND REFORM	19
IV. PURPOSE OF THE LAND REFORM	24
V. STEPS IN THE IMPLEMENTATION OF LAND REFORM IN TAIWAN.	26
VI. RESULTS OF THE LAND REFORM.	41
VII. PEACEFUL LAND REFORM IN TAIWAN AND THE "LAND REFORM" OF CHINESE COMMUNISTS--A COMPARISON	51
VIII. SUMMARY AND PROSPECTS.	55
BIBLIOGRAPHY	67

LIST OF FIGURES

Figure	Page
1. Taiwan Province	5
2. Geographical position of Taiwan	6
3. Illustration of the possible effects of a one-half share rental arrangement and a 62.5 percent leasing arrangement upon the tenant's willingness to apply additional inputs in the production process.	47

LIST OF TABLES

Table	Page
1. Population of Taiwan.	9
2. Major land forms in Taiwan.	14
3. Land use types.	16
4. Number of farm families	21
5. Amount of land cultivated by owners and by tenants	21
6. Farm income and its distribution	43
7. Farm family income, consumption, and saving . .	44
8. Farm population of Taiwan	45
9. Highest reported yield per hectare of unhusked paddy rice in Taiwan, by years	49
10. Rice production in Taiwan	59
11. Changes in gross national product in Taiwan. . . .	63
12. Changes in per capita income in Taiwan.	64

ECONOMIC ASPECTS OF AGRICULTURAL
LAND REFORM ON THE ISLAND
OF TAIWAN

CHAPTER I
INTRODUCTION

The writer was born and raised on the mainland of China where he witnessed the poorness of the Chinese peasantry and the absence of means to improve the situation.

The Chinese Communists took advantage of peasant uprisings and rural instability and occupied the whole mainland in 1949 under the disguise of agrarian reformers.

Upon graduation from Taiwan Provincial Institute of Public Administration in 1951, the writer was appointed by the Taiwan Provincial Government as a land reform investigator in Yunlin Hsien (county) where he had the opportunity to make a first hand survey of the initial conditions following the first phase of the land reform program, i. e. , rent reduction, and subsequently to prepare plans for the second phase of land reform, i. e. , sale of public owned land to tenant farmers.

He personally visited nearly five thousand farm families of the entire Ho-wee and Ma-liao Townships. The third or the final phase of Taiwan's land reform is the land-to-the-tiller program which was started in 1953 and is expected to be completed within the next ten years.

Land reform in a narrow sense means the transfer of land ownership from landlord to cultivating farmer. Broadly speaking, it is concerned largely with improvement of the land tenure system and other related institutions in order to uplift farmer livelihood and contribute to economic development and political stability.

Taiwan's land reform is launched on the basis of Dr. Sun Yat-sen's teachings. It has been delayed for almost forty years by continuous wars on the mainland. Its peaceful and just method is fundamentally different from that used by the Communists. Taiwan's land reform has given farmers the incentive to work and has resulted in a higher level of agricultural productivity.

The national income statistics have shown a continual expansion of Taiwan's economic development during the past ten years and the per capita income has also been increasing steadily although not drastically due to the rapid increase of the island's population. The development of Taiwan's economy in the last decade has been fairly stable.

The future economic well-being of Taiwan depends upon industrial development and the expansion of foreign markets for industrial products. A sound agricultural foundation has served to quicken the pace of industrialization.

These facts were major stimuli of the writer's interest in carrying out an economic appraisal of the land reform program.

Some basic data had been assembled before the writer arrived in the United States. At Oregon State University the limited sources of current data in English have been studied and this brief synthesized presentation of all the findings has been prepared.

The main objectives are to examine the soundness of Taiwan's land reform, its economic aspects and future outlook.

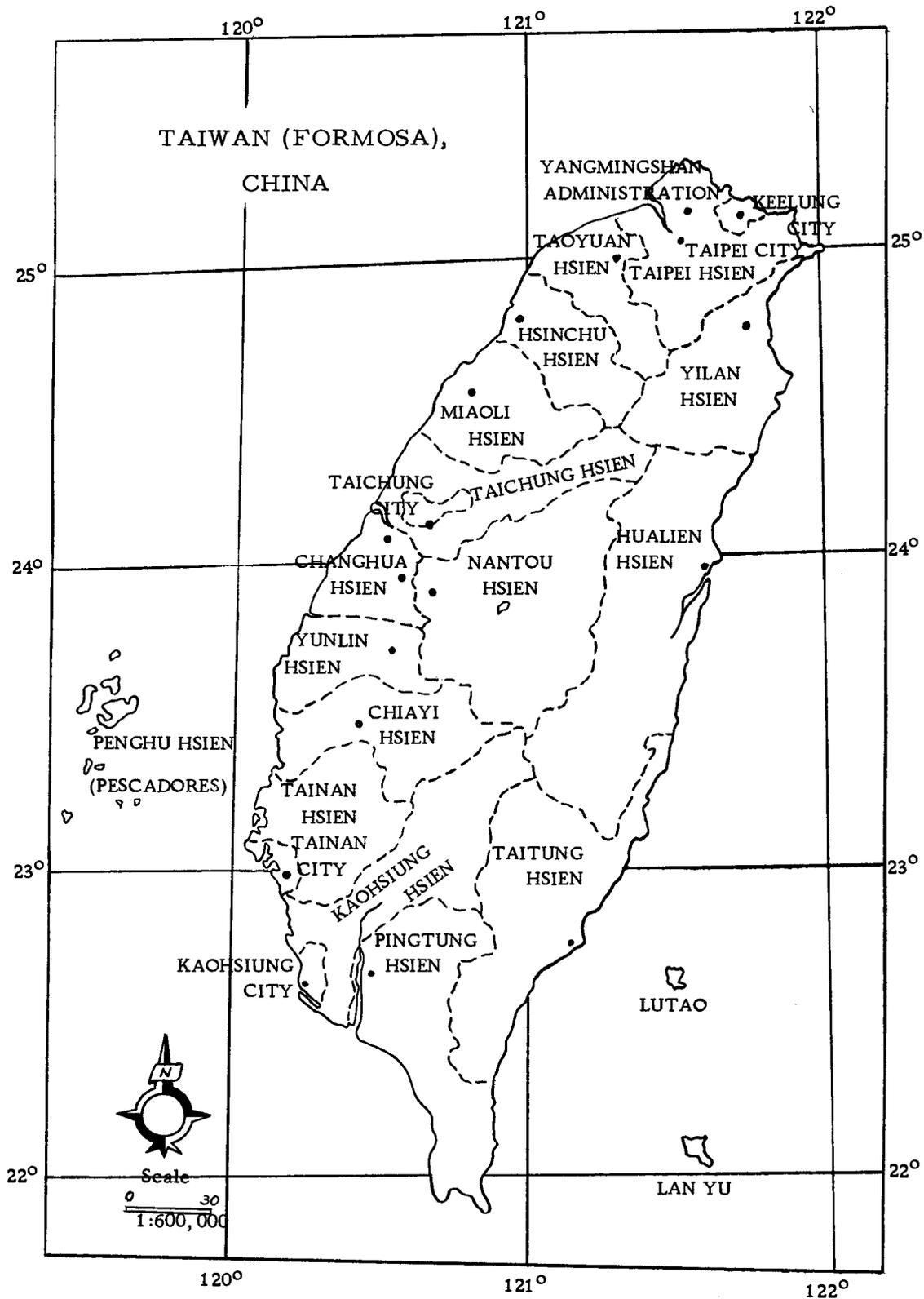
CHAPTER II GENERAL SURVEY OF TAIWAN

Geographical Features

Taiwan is an island off the southeastern coast of the Chinese mainland. The Chinese name "Taiwan" means terraced bay. The Portuguese first called it "Formosa", which means beautiful island. Taiwan is separated from the province of Fukien, China by the Taiwan Straits, from 90 to 120 miles wide. It is 225 miles north of the Phillippines and 665 miles southwest of Japan.^{1/}

Taiwan is shaped like a tobacco leaf, about 240 miles in length and about 95 miles at the greatest width (21). What is commonly referred to as Taiwan today consists of the island proper of Taiwan which measures 13,808 square miles, the Penghu group (or the Pescadores) of 64 small islands and 13 other outlying islands.^{1/} In addition, there is a chain of islands in the Taiwan Straits, including the Kinmen group (Quemoys), about 60 square miles in area, and the Matsus, about 10 square miles, which are also under the effective control of the Government of the Republic of China.^{1/} The Taiwan complex is a little larger than the Netherlands or about the size of Massachusetts and Connecticut combined, or approximately

^{1/}Source: Government Information Office, Republic of China.



Hsien - In China, the political unit next below the Province

Figure 1. Taiwan

one-seventh of the size of Oregon.

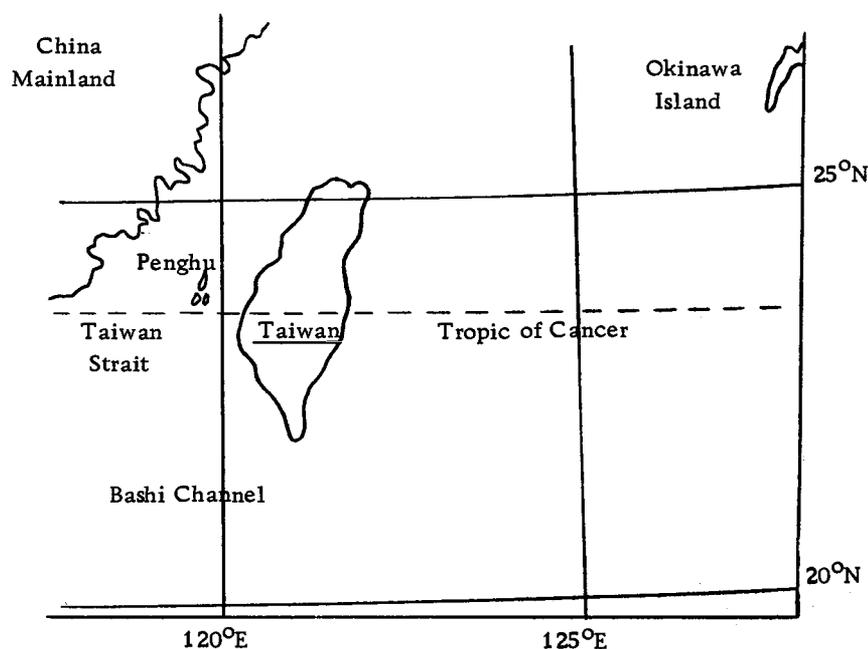


Figure 2. Geographical position of Taiwan.

The climate of Taiwan is sub-tropical, with plenty of rainfall and sunshine. The Tropic of Cancer crosses it in the south. Average temperature is 70.9°F in the north and 75.7°F in the south.^{1/} The summer lasts from May to October, while the winter, short and very mild, lasts only two months, January and February.^{1/}

Rainfall varies from 1,235 millimeters (about 50 inches) per year in the southwest to over 4,940 millimeters (about 200 inches) per year in the northeast (23). Snow is not seen except on some mountains in winter.

^{1/}Source: Government Information Office, Republic of China.

Typhoons and strong winds along with occasional excessively cloudy winters in the north or infrequent droughts in the southwest plains do occasionally restrict agricultural production (23).

The terrain is dominated by rugged hills and high mountains. A mountain chain, rising in one place to 12,000 feet and running down the centre of the island, divides the 13,808 square miles of the total area into two distinct regions. The western half is rich fertile soil, well watered by innumerable streams whereas the eastern section is mostly rugged and does not lend itself to intensive cultivation.

Population

Population on the island has increased rapidly during the past three centuries. The increase during the early periods consisting largely of migrants from mainland China, particularly in times of war and famine. The population of Taiwan, not including armed forces, was 6,090,860 according to the December, 1946 census. Today this figure has doubled. By the end of December, 1964 the civilian population in Taiwan stood at 12,256,682 of which 6,294,935 were men and 5,961,747 women.^{1/} The total population of Taiwan (including armed forces) is therefore well over 12 million, more than that of Australia. Less than two percent of the total population of

^{1/} Source: Government Information Office, Republic of China.

Taiwan are aborigines who are divided into nine tribes.^{1/} Two fifths of them have moved out of mountain reservations and are living on the plains.

Over 98 percent of the total population of Taiwan is all of Chinese stock, their ancestors coming largely from Fukien Province. About one and a half million people are migrants, who moved to Taiwan after the Second World War from every province of China, and their dependents.

The annual natural rate of population increase was estimated from 3.0 percent to 3.8 percent in the past fifteen years (30). This gives a warning to the Government in view of the limited land area. Few countries in the world today have as dense a population per unit of land area and as rapid a rate of increase as Taiwan.

Birth control and family planning are now being encouraged by the press and Government. In fact there is a tendency to reduce the rate of population increase as Taiwan is moving rapidly toward industrialization.

Table 1 shows Taiwan's population change from 1946 to 1964.

^{1/} Source: Government Information Office, Republic of China

Table 1. Population of Taiwan.^{1/}

Year	Population ^{2/} (End of Dec.)	Natural Increase ^{3/} Rate (%)	Year	Population (End of Dec.)	Natural Increase Rate (%)
1946	6,090,860		1956	9,390,381	3.682
1947	6,495,099	2.016	1957	9,690,250	3.293
1948	6,806,136	2.533	1958	10,039,435	3.407
1949	7,396,931	2.922	1959	10,431,341	3.394
1950	7,554,399	3.182	1960	10,792,202	3.258
1951	7,869,247	3.840	1961	11,149,139	3.158
1952	8,128,374	3.674	1962	11,511,728	3.093
1953	8,438,016	3.579	1963	11,883,523	3.014
1954	8,749,151	3.647	1964	12,256,682	3.140
1955	9,077,643	3.670			

^{1/} Official statistics released by Taiwan Provincial Government not including Armed Forces personnel drafted while on the China mainland and still in the service in Taiwan..

^{2/} The population at the end of each year represents the population at the end of the previous year plus net immigration and natural increase during the year.

^{3/} Birth rate minus death rate.

Political, Social and Economic Conditions

Taiwan is legally a province of China. In 1949, after the Chinese Communists had overrun the Chinese mainland, the Government of the Republic of China (the only lawful Government over the whole China being presently recognized by the United States) temporarily moved its seat to Taipei, then the capital of Taiwan Province. Since then the Government on Taiwan has often been identified in the foreign press as the Government of Free China.

Therefore, Taiwan has a National as well as a Provincial Government.

The form of Central Government follows the five-power system envisaged by Dr. Sun Yat-sen, founder of the Republic. There are five Yuans (branches of government) under the President: the Executive, Legislative, Control, Judicial, and Examination Yuan. The President and Vice President are elected for a six-year term by the National Assembly.

The Executive Yuan is somewhat similar to the cabinet in Western countries. Under it are eight ministries (National Defense, Internal, Foreign Affairs, Finance, Education, Justice, Economic Affairs, and Communications), two commissions (Mongolian and Tibetan Affairs; Overseas Chinese Affairs), the Government Information Office, and Comptroller General's Office.

The Legislative Yuan is the highest lawmaking body. The Control Yuan exercises the powers of consent, impeachment, censure and auditing. The Judicial Yuan has the Council of Grand Justices, the Supreme Court, the Administrative Court, and the Committee on the Discipline of Public Functionaries. Under the Examination Yuan are the Ministries of Examination and Personnel.

The Provincial Government with its headquarters at Nantou is the highest administrative organ for the province of Taiwan and is responsible for the domestic affairs of the island. There are now under the Governor ten service units, viz. , the Departments of Civil Affairs, Finance, Reconstruction, Education, Agricultural and Forestry, Social Affairs, Police Affairs, Communications, Public Health, and the Food Bureau. All subsidiary organizations and divisional services are grouped under the various Departments.

In Taiwan, there are three major political parties. The Kuomintang (KMT), or National Party is the strongest, then the Democratic Socialists whose policy resembles that of the British Labour Party, and the Young China Party.

Members of the provincial, county, municipal, borough and township assemblies in Taiwan are chosen every three years in public elections in their respective constituencies. The mayors and 16 magistrates in Taiwan are also popularly elected as in any democratic country. Nearly all the mayors and magistrates, elected by

secret ballot, are native-born. At the election, each party puts forward its candidates.

Personal freedom, political freedom, press freedom, and religious freedom are the recognized rights of the individual. No commissars or secret police watch the daily movements of individuals, who are free to travel and engage in the occupation of their choice.

Industrial resources are limited in Taiwan. Ores are not rich. There is little native-grown raw cotton and crude oil. Nature has not endowed Taiwan with special resources for industrial development. However, in order that Taiwan's economy may be self-supporting, great efforts have been devoted to industrialization. There are over 20,000 factories in Taiwan including over 100 larger enterprises (32). To keep the machines running, steel scrap must be imported from Japan and the U. S. A. , wheat and soy beans from the U. S. A. , wool from Australia and crude oil from the Middle East.

Agriculture remains the backbone of the economy. Rice and sugar remain the two most important products of Taiwan. Both have registered record yields in the past years.

Farmers in Taiwan are enjoying better living conditions than most places in Southeast Asia. With increased income after the land reform, they have built new houses, drying grounds and compost shelters, bought water buffaloes, new farm equipment, bicycles,

sewing machines and radio sets, installed water pumps, constructed reservoirs, and planted windbreak trees.

The gross national production of 1964 has reached NT\$^{1/}94.3 billion (approximately 2.36 billion in U.S. dollars) and the per capita national income of 1964 accounted for NT\$6,003 (U.S. \$150).^{2/}

A breakdown of the production value showed manufacturing industry 25.5 percent; agriculture 25.5 percent; trade 16.1 percent; public services 11 percent; transportation 4.5 percent; construction 3.6 percent; mining two percent; power, gas and running water 1.9 percent; banking services 1.8 percent; others 8.1 percent.^{2/}

Land Resources

Major Land Forms

Taiwan is handicapped by very limited arable land. Physiographically, Taiwan is dominated by four groups of land forms, viz., (a) mountains, (b) plains, (c) hills and table lands, (d) dunes and reefs (Table 2).

^{1/} - Forty New Taiwan dollars (yen) equivalent to one U.S. dollar.

^{2/} - Source from Directorate-General of Budget, Accounts and Statistics, Executive Yuan.

Table 2. Major land forms in Taiwan

Land Form	%	Area in Square Kilometers
Mountains	64.3	22,984 (8,874.1 sq. miles)
Plains	22.7	8,120 (3,135.1 sq. miles)
Hills and Tablelands	12.2	4,386 (1,693.4 sq. miles)
Dunes and Reefs	0.8	269 (103.9 sq. miles)
Total		35,759 (13,806.5 sq. miles)

Source: Sino-American Joint Commission on Rural Reconstruction.

Mountains: The mountains of Taiwan are mostly sedimentary rocks. Their typically high and continuous ridgelines are generally parallel to the lengthwise coast lines of the island. Active soil erosion resulting in landslides, rockfalls and mudflows is common on steep slopes and in deep, narrow stream valleys. Heavy silting and flash floods are frequent and widespread in the broad lowlands. They are often aggravated by earthquakes, typhoons, rain and thunderstorms, common in this sub-tropical area. The economic utilization of land both on the mountains themselves and in the wide expanse of lowlands of Taiwan is influenced by these high mountains in many ways. The mountains form a high land barrier with elevation from 3,000 to about 4,000 meters above sea level. They hinder the monsoon air currents and catch enormous amounts of moisture in the form of rainfall averaging 2,500 millimeters (approximately

100 inches) annually over an area of more than 10,000 square kilometers. Optimum rainfall and wide range of elevations offer excellent conditions for the growth of useful forest trees. Without forest cover, the mountains would be vulnerable to the destructive erosive forces of rainwater heavily concentrated in these highland areas. By shielding the seasonal northeasterly winds, the mountains make possible a dry winter season in the southwestern plains where sugar cane and other crops require a dry spell for concentrating sugar and maturing of seeds (23).

Plains: Upon the vast expanse of alluvial and coastal plains, mostly on its west coast, depends the bulk of Taiwan's agricultural production. Over all other land forms the plains have many advantages economically in general and agriculturally in particular.

Constituted largely of fine grained sediments washed down from adjacent mountains and hills, alluvial soils have higher fertility than most others. Adequate water supplies, both surface and underground are normally present in the plains. Readily accessible to urban, cultural, administration centers and in particular to transportation routes and markets, the plains support the largest number of people per unit of land area (23).

Hills and Tablelands: Between the mountains and the plains, there lies a complex zone of hills and tablelands. Agricultural production in these areas often suffers setbacks resulting from

unpredictable rains or unreliable irrigation water supply. These areas are marked by an exceedingly low organic matter content and consequently low fertility level. However, closer to the plains and more accessible than the mountains, the hills and tablelands are ever increasing targets of agricultural expansion (23).

Dunes and Reefs: Along Taiwan's western coast there are many sections of tidal sand flats and actively migrating dunes. The periodically receding tidal or stream waters expose the otherwise submerged sand along the beach, in the stream bed or from the river banks (23). Actual farm reclamation has already started on some 15,000 hectares of west coast tidal land in Taiwan. Table 3, prepared by the Sino-American Joint Commission on Rural Reconstruction shows the present land use.

Table 3. Present land use classification.

Present Land Use Types	%
Paddy	15.7
Upland crops	13.5
Grassland	8.5
Water, urban, etc.	4.0
Denuded unplatable	3.2
Forest	55.1

The Economic Role of Agricultural Land

The gross value of products from the various forms of direct and indirect uses of land accounts for more than half of the entire national income of Taiwan. Direct products from agricultural contribute about 25.5 percent.^{1/}

The significant role of land and good land use in the island's economy may be explained from the fact that nearly 70 percent of the island's population is making a living from the direct and indirect utilization of land including farming, fishing, food processing, and manufacturing of land products (23).

In the potentiality of earning foreign exchange, agricultural products exported from Taiwan averaged over 90 percent before 1955 (23). Out of US\$ 124,042,000 realized from agricultural exports in 1955, 54.7 percent is from cane sugar and 26.3 percent from rice. Tea, bananas, pineapple, citronella oil, bamboo shoots and other fruits together earned about 16 percent. The remaining three percent was derived from other farm and forest products of which timber and feathers were the main contributors (23).

Some of the exportable items fluctuate somewhat in their percentage contribution to the nation's foreign exchange earnings partly

^{1/} - Source: Directorate-General of Budget, Accounts and Statistics, Executive Yuan.

on account of price changes in the export market. The total export value has increased more than double in recent years due to the rapid increase in the production of textile, hardware, metals and machineries. Total export value during 1962 was US\$238, 600, 000 and during 1963 was increased to US\$ 357, 500, 000 of which cane sugar was US\$ 106, 000, 000 and rice US\$ 23, 000, 000 (19). Sugar, rice and fruits are still the major items among the exports today.

The wisest use and management of land resources and appropriate allocation of economic means must be made in order to safeguard and boost the land productivity for the ever-increasing population.

CHAPTER III PROBLEMS EXISTING BEFORE LAND REFORM

Various steps must be coordinated to solve the food problem and to improve the economy of Taiwan. In this paper, special stress is laid on the land reform, its results, and its future prospects.

Before the implementation of the land reform program, prior to 1950, Taiwan's agriculture was faced with the following problems:

Small Farm Size and Irrational Tenure System

Scarcity of farm land had long been the most serious problem encountered by the farmers. With increased agricultural population, the farm operators had to cultivate a very small piece of land usually in the face of surplus labor and shortage of capital. In such a situation, there had been developed an irrational system of land tenure under which disputes between landlord and tenant often became serious. The average farm land rental was kept at approximately 50 percent of the total annual main crop yield and, in extreme cases, it might run as high as 70 percent (7, 10, 43, 46). In addition to the high rental rate, the tenant also had to pay to the landlord a certain amount of "key money" and bear other burdens. As there was no definite term of lease, it might be terminated by the landlord any time at his own will. Most of the lease contracts were made

verbally. Only in very rare cases were they put in written form (7, 10, 43, 46).

The number of farm families under such a land tenure system constituted about 65 percent of the total number of farm families in 1947-1949 (46). The area of farm land cultivated by tenants during the period of 1949-1950 was approximately 41 percent of the total area of farm land in Taiwan (46). Tables 5 and 6 show the number of farm families and the amount of land cultivated by owners and by tenants at the beginning of the land reform program.

Table 4. Number of farm families.

Year	Owner Cultivator		Part Owner		Tenant		Total No.
	No.	%	No.	%	No.	%	
1947-49 Average	203,655	34.49	154,578	26.18	232,273	39.33	590,506
1950-52 Average	247,675	37.55	169,216	25.65	242,754	36.80	659,645

Source: Sino-American Joint Commission on Rural Reconstruction.

Table 5. Amount of land cultivated by owners and by tenants.

Year	Owners		Tenants		Land Cultivated by Public Enterprises		Grand Total Hectares	%
	Hectares	%	Hectares	%	Hectares	%		
1949	436,681	50.5	355,897	41.1	72,289	8.4	864,867	100
1950	444,572	51.1	353,774	40.6	72,289	8.3	870,635	100
1951	477,448	54.6	324,137	37.1	72,289	8.3	873,874	100
1952	501,506	57.2	302,308	34.5	72,289	8.3	876,103	100

Source: Sino-American Joint Commission on Rural Reconstruction.

Low Farm Income and Underemployment

With very limited farm land and overcrowded population in agriculture, underemployment of farm labor presented a serious problem. Farm operators often found it difficult to meet their living expenses with cash income from farming and had to depend upon off-farm employment to get additional cash income to cover the deficit of their family expenses.

Technological improvement in agriculture was confined to seed improvement, more fertilizer input, and intensified pest and disease control, while low capital input, surplus labor force and small-sized farms constituted the major obstacles to the introduction of modern farm improvement and advancement in agriculture.

Instability of Farm Income

The constant threat of natural hazards, such as drought, typhoon, insects and disease, made farm output and income rather unstable. The fluctuation of farm prices of major exportable crops, such as sugar, pineapple, tea, bananas, and citronella oil, mainly as a result of unstable international prices, had caused the instability of farm income and difficulties in farmers' financial condition.

Low Rate of Capital Accumulation

Agriculture is the backbone of Taiwan's economy, and capital accumulation in agriculture is essential not only for financing agricultural development, but also for financing industrialization. Under the conditions of small farms, over-population, and low per capita real income, the low level of capital accumulation in agriculture became an obstacle to agricultural and general economic development.

Decrease of Supply of Raw Materials

Agricultural processing industries, such as sugar manufacturing, pineapple canning, tea refining, etc., constitute the major part of industrial operations in Taiwan. These industries depend upon the supply of raw materials from agriculture. However, the supplies of these "special crop" raw materials in adequate quantities and improved quality for industrial production have gradually been decreased due to the change of the production pattern from such special crops to more of staple food crops such as rice. Production of food crops had become more important than so-called special crops because of the rapid increase in total population. Therefore, the supply of special crops, usually those for export, is thus hindered. This is one of the major factors retarding the development of agricultural processing industries in Taiwan.

CHAPTER IV PURPOSE OF THE LAND REFORM

In order to lay the foundation for agricultural development and to seek the solution of some of the problems listed above, the Government of the Republic of China set out in 1949 to implement the rent reduction and the land-to-the-tiller programs, which aimed at uplifting the farmer's standard of living and putting an end to the evils of the traditional system of land tenure which hindered agricultural development.

Land reform of this nature is no remedy to all agricultural problems, but in two respects it helps agricultural progress:

1. It creates a more rational distribution of agricultural income between various groups of investors and producers.
2. It releases the unused energy of land and population for production.

It is the purpose of this land reform program to achieve the land-to-the-tiller ideal set by Dr. Sun Yat-sen, father of the Republic of China. The methods for the solution of land problem are different in various countries and each country has its own peculiar difficulties. The plan set by Dr. Sun long ago was simple and easy--the equalization of land ownership. Because of constant war, this plan had never materialized until the Government of the Republic of China moved its seat to Taiwan.

With bitter experience through the loss of the whole mainland China to the Communists' hand, the Government of the Republic of China exerted great efforts in the fulfillment of Dr. Sun's great principle of People's Livelihood. The Government of the Republic of China after moving to Taiwan decided to carry out completely the land reform program in order to improve economic organization and lift the general morale of the people. It is to make everybody, farmers and land owners alike contented and happy, free from the suffering caused by the unequal distribution of wealth and property.

CHAPTER V STEPS IN THE IMPLEMENTATION OF LAND REFORM IN TAIWAN

The implementation of land reform was divided into three stages:

1. Reduction of farm rent to 37.5 percent of annual harvest.
2. Sale of public owned land to tenant farmers.
3. To redistribute the ownership of excessive private tenanted land.

Rent Reduction Program

The land problem in Taiwan after the World War II consisted of a large tenant population subsisting on exorbitant rentals and insecure farm tenure. Such a situation was not conducive to agricultural progress and social security (rural security).

Since most tenant farmers in Taiwan were burdened with high rentals, the immediate concern of the Government was therefore to relieve such heavy rental burden of the tenant farmers. To achieve this goal, a measure to reduce the amount of farm rent payable to landlords by tenants was adopted by the Government.

The farm rent reduction program was implemented in Taiwan starting 1949. It limits the amount of farm rent on private tenanted land to 37.5 percent of the harvest and revises all abusive tenure practices. It is in fact both a rent reduction and a tenure

improvement program.

When the rent reduction program was under planning in the Government, certain quarters raised doubts about its advisability. They considered that at a time when Taiwan was entirely exposed to the Communists' attack across the Taiwan Strait, it would be unwise for the Government to speak of land reform since any such idea would only tend to cause adverse reactions from landlords. However, the Government was convinced that in order to achieve social as well as national security against communism, there must be reform and progress, and a land reform to improve the economic status of the tenant farmers would do good to both the social order and economic development of the island. With such strong conviction, the farm rent reduction program was firmly launched by the Government as it was planned.

Fixation of the New Rental Rate

Before the implementation of the program, tenant farmers in Taiwan, as mentioned previously, used to pay a land rent varying from 50 to 70 percent of the total harvest. Therefore, the first thing in planning a workable rent reduction program was to establish a new official rental rate. This new rate should serve two purposes:

(a) serving as the maximum rate to which all existing higher rental rates should be reduced, and (b) as a reference rental rate by which

rental rates on land raising special crops could be determined. After studying the actual situation, a rate limiting the rental amount not to exceed 37.5 percent of the annual total harvest of the main crop as rent to the landlord was finally adopted (10). This rate applies to farm land raising rice and sweet potatoes. For land raising special crops such as citrus, tea, and bananas, the new rental rate in each instance was to be worked out by tenant, landlord and the government officials individually on the basis of the 37.5 percent scale in the light of the actual yield and harvesting seasons (46). Once the rate was established, it was to become official.

Appraisal of Standard Amounts of Crop Yield

The new rental rate can not be enforced without the actual knowledge of the total amount of crop yield on each plot of farm land. To acquire such knowledge, it was necessary to appraise the total crop yield on all private farm lands. In making such an appraisal, three ways might be adopted. The first was to let tenant and landlord make the appraisal. The second was to take the actual harvest as the standard, and the last was for the Government or some representative group of landlords, owner-farmers and tenant farmers to appraise a standard amount per unit of land for each locality. During field experimentation it was found that under the first and the second methods, the views of landlord and tenant were often difficult to

harmonize because of the difference in their positions (46). Finally the third method was decided upon to appraise the standard crop yield for use in rent reduction.

The third method was applied by classifying all farm lands into 26 grades according to their productivity, which was known as rural land classification (46). The first classification of farm lands in Taiwan was made in 1905 by the Japanese. Since then it was revised every ten years and the last revision was made in 1945 (46). The new appraisal was made by the 37.5 Percent Rent Reduction Committee in each hsien (county) and city. The amount of standard yield thus appraised was declared by the Government as the standard crop yield upon which the reduced amount of farm rent could be calculated for enforcement under the program.

Establishment of New Farm Lease Contracts

To put the new rate into force, landlord and tenant were required to sign a new farm lease contract for observance. In performing this procedure, all landlords and tenants were first required to register their old lease contracts with the Government. After that the Government issued new lease contracts in printed form to landlords and tenants for them to affix their signatures thereon in the presence of government officials. The new contracts were issued in triplicate, one copy each for landlord, tenant, and the township

office for file. All landlords and tenants came to register their old farm lease contracts with the Government and sign new contracts in observance of the program.

Strengthening of Farm Security

Besides the reduction of farm rent, the program further strengthened the farm security of the tenant farmers in the following ways:

(a) The tenure of the farm lease contract was lengthened uniformly to six years from the first day the contract was signed.

Unless under special conditions set forth by the law, the landlord is not allowed to terminate the lease before its expiration (46).

However, the tenant may terminate the lease at any time.

(b) Rent on subsidiary crops such as a winter crop of vegetables and a summer crop of melons, advance payment of rent, and security deposit were all abolished. Tenant was no longer required to make such extra payment to landlord and landlord should refund to tenant such deposit if he received any (46).

(c) Tenant was given the preferential right to renew the lease contracts after it expires at the end of the six-year period. Unless otherwise specified in the law, landlord can not refuse the request for renewal (46).

(d) All farm lease contracts must be in written form. Verbal leases are prohibited (46).

The above provisions were incorporated into the new lease contract. These improvements have not only strengthened the tenure security but have also stimulated production incentive on the part of the tenant farmers.

Supervision of Rent Payment

The establishment of the new farm lease contracts marked the beginning of the rent reduction program but not the completion of it. The test for its success or failure lies in the observance of the program, i. e. , would the landlord and tenant abide by the terms of the new contract and pay or collect the farm rent as stipulated in the law? To assure that the program was fully enforced a system of periodic checks to supervise the rent reduction program was carried out by the Government. Under this system, the Government divided the Province into six districts and employed 62 inspectors to supervise the rent payment practices. The supervision continued for three years. Up to 1952, some 35,000 rent and tenancy disputes were uncovered and settled by the Government with the help of the Farm Tenancy Committees (46). It was largely by this kind of field supervision, that the provisions of the rent reduction programs were kept fully enforced in the rural areas.

Effects of the Rent Reduction Program

Many effects were produced as a result of the implementation of the rent reduction program. The most significant ones were the fall of the market value of those farm lands affected by rent reduction and the gradual purchase of those lands by tenant farmers with their own savings. Both effects paved the way for the introduction of further reform.

The drop in market value of private tenanted land began during the second year of rent reduction. The decline was at first gradual. However, when landlords saw that they could neither take back the lease land after termination nor sell the land to persons other than the present tenants, the market price fell further. By 1952, tenanted land could only be sold at 50 to 75 percent of the price of the owner-operated land (46). As this trend continued, tenant farmers began to purchase such lands from landlords with their own savings. Investigations made by the Taiwan Provincial Government showed that within a period from 1949, before the implementation of the land-to-the-tiller program, to 1953, a total of 66,000 tenant families in Taiwan bought 35,000 hectares^{1/} of tenanted land directly from landlords.

^{1/} One hectare = 2.471 acres.

Sale of Public Owned Land

Taking advantage of the situation as a result of the rent reduction program, the Government proceeded with a land-to-the-tiller program. This program was undertaken in two steps: the first step was to sell public lands to tenant farmers for ownership and the second step was to redistribute the excessive private tenanted lands among tenant-cultivators (10, 46).

In Taiwan, sale of public lands was first done on a trial basis in 1948. But sale was not re-opened until 1951 when the Government decided to carry out a land-to-the-tiller policy and get rid of its own status as landlord on the public domain. Since then, more sales were made by the Government in 1952, 1953, and 1958 respectively (43). During these four sales, some 71,666 hectares out of the 106,000 hectares of public lands leased to farmers were sold by the Government to 139,688 tenant families for ownership (43). The last phase was carried out in 1961 with a total of 96,004 hectares sold to tillers (43). A total of 165,443 farm families were benefited by this program (43, 47).

The sale price was set at 2.5 times the annual crop yield of the land and was to be paid in twenty installments spread over ten years (10, 43, 46). Each farmer was permitted to purchase

0.5 to two hectares of paddy field or one to four hectares of dry land (10, 46).

Land-to-the-Tiller Program

Along with the sale of public lands, the Government of the Republic of China prepared for the introduction of a private land redistribution program. First, the Government surveyed and clarified the land ownership conditions in the whole province (island proper and Pescadores) and next the Legislative Yuan enacted on January 20, 1953 a law called "Land-to-the-Tiller Act". The land reform measure as authorized by this Act was known as the land-to-the-tiller program.

The land-to-the-tiller program in Taiwan was essentially a measure to redistribute private excessive tenanted holdings. It was carried out through the following steps:

Setting up of Maximum Tenant Holdings for Land Owners

The law provides that beginning with the day of enforcement, each land-owner is permitted to own tenanted land not exceeding three hectares of medium grade paddy field or six hectares of medium grade dry land (14). He may operate the retained land himself or continue to lease it. Any surplus tenanted holding exceeding the above limits must be sold to the Government for resale to tenant

farmers (14). Land tilled by owners themselves is not affected. Land-owners who are widows, orphans, old aged and physically disabled and corporate owners such as education and charity organizations may retain a tenanted area twice the above retention limit (14).

Purchase and Resale Price of the Excessive Lands

As mentioned previously the price for purchasing and reselling the excessive lands was fixed at 2.5 times the annual production of the land (14). For example, if the land produces five thousand kilograms of paddy rice a year, the purchase and resale price should be 12,500 kilograms of paddy rice.^{1/} This standard amount of productivity was based on the productivity record appraised by the Government under the farm rent reduction program. This amount served as both the purchase price and the resale price (14).

Payment of the Purchase and Resale Price

The payment of land purchase and resale price under the land-to-the-tiller program in Taiwan is unique as compared with the practice in other countries. For the land purchased the Government

^{1/} The 2.5 times of annual production formula is designed for practical convenience as well as justice. It is based upon both the income-capitalization and the market-comparison approach. The income is capitalized at 15 percent in this formula.

$$2.5 = \frac{37.5\%}{0.15}$$

paid the price 70 percent in land bonds in kind and 30 percent in the stockshares of four governmental industries to landlords (12, 13, 42).^{1/} The land bonds were specially designed and issued to protect the value of the payment from possible inflation while the stockshares of Government industries aim at transferring to industry private capital so far tied up in land. For the land resold, the farmer purchasers pay to the Government the price in kind, in either rice or sweet potatoes according to the quality of the land purchased, i. e., paddy field or dry land. The bonds and stockshares were paid in one lump sum to the landlord by the Government (12, 13).

The land bonds bear an interest of four percent per annum and are to be redeemed in 20 installments spread over a period of ten years and the stockshares are negotiable and may be sold in the open market by the holders (12, 13).

The payment of resale price is divided into 20 installments spread over ten years plus a four percent interest per annum. Farmer purchasers pay two installments each year after two crop harvests (42).

The purchase of retained land from private owners may be paid for in cash or in kind depending upon individual agreement. On the other hand, payments to the

^{1/} "In kind" means value in terms of rice or sweet potatoes.

Government must be made in terms of rice or sweet potatoes. The Government will accept the delivery of rice but will not accept the delivery of actual sweet potatoes. This is because of the difficulties of transportation and the fact that sweet potatoes do not keep well in storage (42).

The payment of sweet potatoes by farmers or the redemption of sweet potato bonds by the Government are to be made in cash by converting sweet potatoes into cash at a price determined by the Government according to the local market (42).

The face values of both kinds of bonds are as follows:

For rice bonds: ranging from 50 kilograms up to 10,000 kilograms.

For sweet potato bonds: ranging from 100 to 30,000 kilograms.

Effects of the Land-to-the-Tiller Program

The land-to-the-tiller program was implemented by the Government immediately after its promulgation in January 1953. To prevent landowners from subdividing their land holdings to evade government purchase, the law was to retrace eight months back from the first day of the enforcement (42).

At the the close of the year, about 143,568 hectares of excessive tenanted holdings or 55 percent of the total private tenanted land in Taiwan was compulsorily purchased by the Government from

106,049 landlords and resold to 194,823 tenanted families at a total purchase price of 1,272,109 metric tons of rice and 433,262 metric tons of sweet potatoes (46).

The redemption of purchase price and the payment of resale price have demonstrated the success of this program. The Government has duly redeemed to landlords and the farmer purchasers have paid from 98 percent to 99.54 percent of the amount due to the Government.^{1/}

After the completion of the land-to-the-tiller program in 1955, Taiwan still had 90,000 hectares of private tenanted lands retained in the hands of landlords and 140,000 farm families working thereon as tenants and part tenants (43). However, according to the rent reduction law, these retained lands can not be disposed of by their owners except sold to the incumbent tillers. Taking advantage of the situation, the Government undertook in 1957 a land purchase loan program under which the Government may grant loans to tenant farmers to purchase the land they leased (43). The amount of the loan is limited to 60 percent of the land purchase price to be negotiated by tenant and landlord (43). The loan bears an annual interest of five percent to be paid within ten years. The Government appropriated NT\$ 25,000,000 (equivalent to US\$ 625,000) to operate the program

^{1/} - Source: Taiwan Land Bureau, Taiwan Provincial Government.

on an experimental basis through the Land Bank of Taiwan (43).

The experiment was especially welcomed by those tenant farmers who did not have the chance to purchase lands under the land-to-the-tiller program.

To speed up the work, the Government promulgated in July 1959 a special measure entitled "Measure to Protect New Farm Owners in Taiwan Created under the Land-to-the-Tiller Program" which put this experiment into a long-range program (43). The measure set aside a special fund of NT\$ 294, 300, 000 (an equivalent of US\$ 7, 357, 500) to be used in a revolving manner (43).

Under this measure, the following steps are to be carried out:

(a) Local Governments in Taiwan are to register all farmers who are farm hands, tenants, and owner-farmers who need land for cultivation.

(b) Prefectural and township farm tenancy committees are to assist those farmers to approach landlords and negotiate the purchase of some of the legally retained lands.

(c) The Land Bank of Taiwan is to extend land purchase loans from 20 percent to 60 percent of the purchase price to farmer applicants to pay a part of the purchase price with the other part to be provided by purchasers themselves.

(d) Farmer purchasers are to repay the loan within a period from five to ten years at an interest of five percent per annum.

(e) Farmers who purchased the retained land with the Government loan shall not transfer the land before the loan is paid off.

Many tenant families have already acquired all or a part of their leased holdings under the new measure and the private tenanted lands retained in the hands of landlords are rapidly declining. It is estimated that by 1972 the tenant system may be completely wiped out in Taiwan (43). The large scale program to assist tillers to own the land they till started in 1963. The goal is to complete this task within ten years.

CHAPTER VI RESULTS OF THE LAND REFORM

The revolutionary changes in land tenure system as a result of the land reform program have not only provided security in rural areas but have given great incentive to farmers in farm production and management.

The land reform program in Taiwan was carried out by reasonable and legal means for the realization of the land-to-the-tiller policy. This program has resulted in a significant change in the distribution of farmers' income through change of land ownership and reduction of rent payment. The following is an analysis in regard to the changes of farmers' income distribution before and after the land reform program:

According to statistics compiled by the Taiwan Provincial Food Bureau, increase of farm returns as a result of the land reform was about 487 kg. of paddy rice per hectare after the implementation of the 37.5 percent rent reduction program and about 550 kg. of paddy rice per hectare after implementation of the land-to-the-tiller program.

Farm income in both 1950 and 1955 was determined by the Rural Economics Division of Sino-American Joint Commission on Rural Reconstruction. Which is shown as follows:

During the period 1950-1955, total farm income of Taiwan

increased by NT\$6,938,797,000 or nearly trebled.^{1/} Total net farm income also increased by more than 3.4 times.^{1/} This increase of total farm income, however, was due mainly to an upswing in the general price level, although there was a significant increase in agricultural output. Assuming 1950 constant dollars, the increase in net cash farm income amounted to 37.4 percent during that period and represented a true gain in real income.^{2/}

The following two tables were prepared by the Sino-American Joint Commission of Rural Reconstruction to show the increase of farm income and farm family income from 1950 to 1955.

^{1/} Source: Sino-American Joint Commission on Rural Reconstruction.

^{2/} The price level from 1950 to 1955 increased approximately 2.5 times according to the price index of the Ministry of Economic Affairs.

Table 6. Farm income and its distribution.

	1950	1955
Gross Cash Farm Income	NT\$ 3,481,078,000	NT\$ 10,419,875,000 ^{1/}
Certain Direct Cash Production Expenses (fertilizer, seed, feed, irrigation, insecticides, etc. but not including wages paid, interest on borrowed money, taxes, and rent paid)	-NT\$ 1,229,269,000	-NT\$ 2,684,013,000
Net Cash Farm Income (above such direct cash costs as fertilizer, seed, feed, irrigation, insecticides, etc.)	NT\$ 2,251,809,000	NT\$ 7,735,862,000 ^{1/}
Distribution of the Net Cash Farm Income ^{2/}	(Units: NT\$ 1,000)	
1. Total wage payment	877,616	3,715,439
(Wage for family labor)	596,589	3,054,298
(Wage for hired labor)	281,027	661,141
2. Total rent payment	975,028	2,355,143
(Rent for farmers' own land)	512,271	1,889,437
(Land rent paid)	462,757	465,706
3. Total interest	259,145	1,016,880
(Interest for farmers' own capital)	175,617	749,201
(Interest paid)	83,528	267,679
4. Taxes and fees	140,000	648,400
GRAND TOTAL	2,251,809	7,735,862
		100.00%
		100.00%
		48.03%
		39.48%
		8.55%
		30.44%
		24.42%
		6.02%
		13.15%
		9.69%
		3.46%
		8.38%

^{1/} The 1955 gross cash-farm income at 1950 constant dollars would be approximately NT\$4,167,550,000; the net cash farm income would be approximately NT\$3,094,350,000.

^{2/} The greatest changes occurred in wage payment and rent payment, a positive and negative change, respectively.

Table 7. Farm family income consumption, and saving. (Unit: NT\$1,000)

	1950	1955	
Retained Net Farm Income ^{1/} (Farm Earnings)	1,565,504	6,354,076	86.47%
Non-farm Income	<u>479,279</u>	<u>993,854</u>	<u>13.53%</u>
Total Farm Family Income	2,058,897	7,347,930 ^{2/}	100.00%
Total Consumption (of Farm products)	1,765,867	6,593,865	89.74%
(of non-farm products)	882,173	2,967,239	40.38%
Total Saving (for ag. investment)	292,373	748,149	10.18%
(for non-ag. investment)	269,373	593,898	8.08%
Statistical Discrepancy	23,000	154,251	2.10%
	657	5,916	0.08%

^{1/} This "retained net farm income" represents the sum of "total wage payment", "rent for farmers' own land" and "interest for farmers' own capital" shown in Table 6.

^{2/} The 1955 total farm family income at 1950 constant dollars would be approximately NT\$2,939,170,000, which shows a gain of 42.75 percent in real income during that period.

Table 7 indicates that farm income is the major source of total farm family income. The percentage of farm income in total farm family income increased by about ten percent from 1950 to 1955. Average propensity to consume in 1955 also increased by about four percent as compared with 1950. However, the ratio of consumption of farm products to total consumption decreased from 42.85 percent in 1950 to 40.38 percent in 1955, while the ratio of consumption of non-farm products to total consumption increased from 42.92 percent to 49.36 percent.

From the above observation, it would appear that due to the higher farm family income, the living standard of farmers may have improved. These figures, however, apply to all of Taiwan. The question may be asked, "Did per capita income increase?"

Table 8. Farm population of Taiwan

Year	Persons	Year	Persons
1950	3,998,470	1957	4,790,084
1951	4,160,610	1958	4,880,901
1952	4,257,136	1959	4,975,233
1953	4,381,816	1960	5,373,375
1954	4,488,763	1961	5,467,445
1955	4,603,138	1962	5,530,832
1956	4,698,532	1963	5,611,356

Source: Taiwan Agricultural Yearbook

Based on the data shown in Tables 7 and 8, the per capita farm family income of the farm population in 1950 was NT\$515, while the per capita farm family income of the farm population in 1955, at 1950 constant dollars, was NT\$639.^{1/} This shows that the farmer's standard of living raised slightly over 24 percent after the land reform (in 1955) regardless of the rapid increase of farm population.

Land reform benefited nearly 500,000 (over 60 percent) of Taiwan's farm families (43). All tenant farmers who had purchased land under the land-to-the-tiller program (in 1953) paid up their last installments in 1963 (43). As a result, owner-tillers who can now enjoy the full share of the fruits of their labor have increased from 36 percent of the total number of farmers in 1949 to more than 65 percent at present (43). Also, the 21 percent of the total, who are now part owners of the land they till, and 14 percent, who have remained tenant farmers, are also enjoying much higher incomes than they did before the land reform.

Richer reward to the farmers for their work gives them a strong incentive to step up production, make improvements on the land and adopt new farming equipment and practices.

^{1/} Calculated by the writer.

The concept of incentive on the part of the operator may be illustrated by a simple graph as follows:

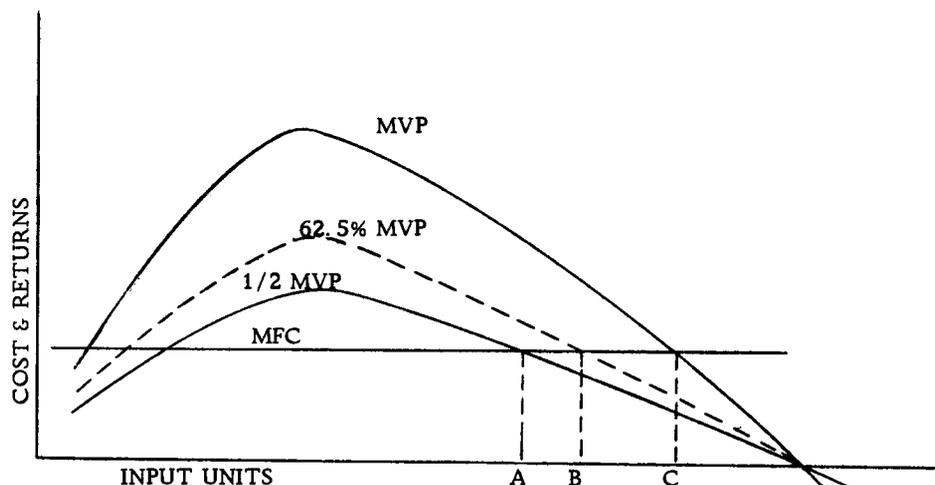


Figure 3. Illustration of the possible effects of a one-half share rental arrangement and a 62.5 percent leasing arrangement upon the tenant's willingness to apply additional inputs in the production process.^{1/}

The graph above represents the situation that exists under an agricultural share lease (as almost all of Taiwan's lease contracts were percentage share leases) in which the landlord supplies a fixed input of land and in return gets 50 percent or 37.5 percent share of the crop, while the tenant supplies all of the variable inputs.

Under these conditions, the tenant pays the full marginal factor cost (MFC), such as labor, fertilizer, etc., of each successive variable input unit but receives, in one instance, only half of the

^{1/} Reference: (4).

marginal value product (MVP), and in the other instance, 62.5 percent of the MVP.

If the operator in this example were an owner-operator he would find it profitable to apply up to C inputs (at which $MFC = MVP$). But as a half share tenant, he finds it more profitable to stop with A inputs because this is the point at which his MFC equals his 50 percent share of the MVP. The 37.5 percent rent reduction program gives a tenant at least 62.5 percent share of the MVP and hence he would find it profitable to increase his input units to B.

A rational tenant will not apply inputs beyond A if he only gets 50 percent share of the crop because any application of inputs beyond A would involve a transfer of income from the tenant to the landlord.

From this example it can be seen that any change in the rental system that would give the tenant a larger share of the total crop than the old rental share system of 50 percent will give the tenant an incentive to increase his inputs and produce a larger crop per hectare. This is illustrated in Figure 3 in which the dotted line represents the 37.5 percent rent reduction program. Since the tenant now gets 62.5 percent of the total crop he will be influenced to increase his inputs from A to B which would mean a higher yield per hectare. Therefore it is very possible that the lower rents to the landlord (and higher shares to the tenant) coupled with the land-to-the-tiller program of ownership, both programs sponsored by the

Government, were in this way responsible for a large share of the increases in yields per unit of land in Taiwan.

According to government data shown in table 9, the highest reported yield of paddy rice production from 1948 to 1963 has been steadily increasing per unit of land.

Table 9. Highest reported yield per hectare of unhusked paddy rice in Taiwan, by years.

Year	Paddy Rice Production (unhusked) Kilograms Per Hectare
1948	4,650
	Land reform began in 1949
1952	5,530
1959	6,062
1963	7,239

Source: Government Information Office, Executive Yuan.

An objective field survey was conducted by Dr. E. Stuart Kirby, Head of Department of Economics and Political Science of the University of Hong Kong in 1959 who randomly interviewed 75 households in each of the 18 townships surveyed including a total of 1,350 households representing 9,421 persons (29).

About 45 percent of the farm households believed that the land-to-the-tiller program had caused an increase in rice production. None believed it had decreased production. The rest said they could make no comparison on this point (29). Regarding the

effect on the production of other crops, 32 percent believed the effect had been good, 22 percent said that it had made no significant difference and 45 percent could make no comparison.

The farmers who believed the land reform program had no effect on the production apparently thought the increase of production was the fruit of their harder work and considered the land reform as a natural law that ought to be carried out by the Government. They perhaps did not realize that they may have worked harder because of the greater incentive offered by the land reform.

Today, nearly 90 percent of the land under cultivation is operated by owner-operators (43, 47). Over 86 percent of total farm families are owner-operators (43, 47, 31).

The land reform in Taiwan has brought about an institutional change in agriculture, through the correction of the irrational tenure system, provision of incentive to the cultivators, and shifting the land capital of landlords to industrial investment. All of these results have provided a sound basis for agricultural and economic development in Taiwan.

CHAPTER VII
PEACEFUL LAND REFORM IN TAIWAN AND THE
"LAND REFORM" OF CHINESE COMMUNISTS
--A COMPARISON

The land reform program was implemented in Taiwan to achieve the land-to-the-tiller ideal. It was carried out by reasonable and legal means according to peaceful and gradual procedures. It was fundamentally different from the communist type of "land reform" whereby the Communists on the Chinese mainland liquidated millions of landlords, confiscated their land, and made collective serfs of the peasants.

The land reform in Taiwan took the interests of both landlords and tenants into equal consideration. The results of the land reform in Taiwan have actually brought a remarkable upswing in agricultural production and economic development.

The aim behind the Government's land reform program is to enable the farmers to exercise full freedom in making use of the land they till and to reap the fruits of their labor. It is the intention of the Government of the Republic of China that the farmers should live in abundance in an atmosphere of freedom and progress, free from exploitation and want. But it is the policy of the Chinese Communists to exercise strict control over food so that they may have a large supply of slave labor on the farm and cannon fodder on the battlefield.

With regard to method, it is the practice of the Chinese Communists to liquidate landowners, confiscate their farms, instigate class struggle, and to purge all those opposed to their policy (5, 7, 17, 21, 35, 48, 50). Not only do they not pay any compensation for the land expropriated, but they also confiscate the landowners properties, furniture, clothes and other personal effects. In the end, the landowners are made to pay for their "crime" with their lives and the lives of their families (7, 17, 21).

In Taiwan, on the other hand, the Government employs peaceful means in gradually putting excessive private-owned land into the hands of the tillers. In addition to the payment of adequate compensation to the landowner for the loss of his land, the Government also assists him in putting his capital to good use by investing in the industries.

The "land reform" of the Chinese Communists has brought about class struggle, bloodshed and hunger, and has deprived many farmers of their homes (7, 17, 21). It has introduced an element of disharmony into society. Landowners have been separated from their families; many of them have lost their lives (7, 17, 21). Others are forced to work on collective farms, deprived of their self-respect, their freedom and the right to live like human beings. It is their lot to serve as slave labors.

The land reform carried out by the Government in Taiwan,

on the other hand, has brought about not bloodshed, not class struggle, not hunger or broken homes, but a larger degree of social stability, an increase in food production, and improvement in the livelihood of the people, and an added stimulant to industrial development.

The land reform program has brought to Free China a new hope for a brighter future, and has resulted in greater social stability and progress.

As has been pointed out by Dr. Sun Yat-sen, Father of the Republic of China, social stability and progress can only result from the economic well-being of the majority of the people (40). It is therefore imperative that we should, instead of instigating class struggle like the Communists, look to the welfare of all of the people.

According to Dr. W. G. Goddard, an independent Australian writer, the number of people executed, shot, or otherwise disposed of by the Chinese Communists is over 15,000,000 since they occupied the mainland (21). Of this total number 3,708,475 persons were landlords (21). The figure was tabulated from communist journals throughout China together with reports of the Chinese Security Department.

While the farmers in Taiwan can enjoy complete freedom in disposing of their land or land products, the farmers in communist areas can not own any land and they have to obtain approval from

the communist authority in order to use the products of the land they till.

It has been learned that in communist territory farmers have to turn in more than 80 percent of the farm products to the Government.^{1/}

^{1/} Source: Security Department, Ministry of National Defense, Executive Yuan.

CHAPTER VIII SUMMARY AND PROSPECTS

Beginning with 1949, Taiwan carried out a series of land reforms which have now been mostly completed.

When the island was returned to China in 1945, tenancy was a serious problem here as it was on the China mainland. Nearly half of its farm land was under tenancy and some tenants paid to landlords as much as 70 percent of their annual crop as rental and had no security of tenure (7, 10, 43, 46). Their income was extremely low and their life difficult.

The land reform program was carried out in three phases. The first phase was carried out in 1949. The program compulsorily reduced farm rental rates in Taiwan from an average of 50 percent to a uniform rate of 37.5 percent of the annual crop yield (10, 46). Many tenant families were benefited. The second phase began in 1952. By the end of 1961, 94,000 hectares of public land had been sold by the Government to poor farmers at a price of 2.5 times its annual crop yield (43). Under this program 165,443 tenant families had acquired landownership by the end of 1961 (43). The third phase was started in 1953. The Government purchased all private land holdings exceeding three hectares of paddy field for resale to their tenant cultivators. The tenant purchasers paid 2.5 times the annual crop yield to the Government in twenty semi-annual installments over

a period of ten years. By the end of 1961, 139,249 hectares, or nearly 60 percent of the total private tenanted lands were purchased by the Government and resold to tenant families who have thus become independent owner-operators (41, 43).

The land reform program has helped improve the general social and economic conditions in Taiwan. The most important and significant results are increased food production and improvements in farmers' livelihood.

Although the program has contributed significantly to rural security and economic development in Taiwan, there remain some difficult problems to which some effective answers must be found.

Protection of New Owner-Farmers

Following the implementation of the land-to-the-tiller program there has been created a substantially large number of new owner farmers who received the land ownership under the land reform program. As their economic position is still weak, it is necessary to protect them from sinking to the status of tenant farmers or losing their cultivated land. Therefore the Government should provide them long term loans through the Land Bank of Taiwan on a low interest basis so as to help them carry on or improve their farm operation. Also, agricultural extension education should be strengthened to improve the management of their farms. The

Government of Taiwan is working along these lines at present (47).

Exchange and Consolidation of Small Plots

The farmers of Taiwan have been cultivating small areas of land consisting of many small plots which are widely scattered. The average size of a farm in Taiwan is only slightly over one hectare (27). According to the present law of the Republic of China, dating back to 1945, upon the death of the farm owner his entire landed property must be divided equally among all his children. This is one of the reasons why the average size of farms becomes smaller and smaller. This makes it difficult for the farmers to adopt modern methods of cultivation. This situation has not been improved as a result of the land reform. In order to achieve more rational land use and to increase farming efficiency, exchange and consolidation of land plots is being undertaken with government assistance. In this way widely separated pieces of land owned by the same person can be consolidated into one contiguous unit. The Government is trying to carry out this program with compensation, road construction, and improvement of irrigation. It is estimated that this program may be completed by 1973 (43).

Promotion of Farmers' Savings

In the best interest of Taiwan's economic development, it would be better if the saving potential of the new owner-farmers can be used, at least in part, for investment in farm improvement, than to see all this extra income go into consumption or raising the living standard. An intensive educational campaign should be carried out to assist farmers in planning their family spending and consumption.

More Intensive Farming

As arable land is limited, only a little increase in land under cultivation has been possible. The total arable land area has increased only five percent since fifteen years ago, from 830,000 hectares to some 883,468 hectares (39). Continued gain in agricultural production has been largely the result of intensive land utilization.

The following table shows the increase in rice production, the most important crop, during the past years.

Table 10. Rice production in Taiwan. ^{1/}

Year	Average Yield Per Hectare (kg)	Average Yield Per Acre (kg)	Total Annual Production (kg)
1950	1,845	747.0	1,421,468,000
1956	2,284	924.7	1,789,829,000
1960	2,495	1,010.1	1,912,018,000
1964 ^{2/}	2,707	1,096.0	2,260,000,000

Persistent effort to increase yields per unit of land has been directed toward the improvement of irrigation facilities and application of larger amounts of chemical fertilizer, pesticides, and the improvement of seed varieties. From 1950 to 1964 the average yield of rice per hectare increased nearly 47 percent (Table 10).

Industries relating to food production, especially the fertilizer industry, have been put in high priority position in the economic development program of Taiwan (32).

Thirteen new reservoirs have been added to the original seven built by Japanese, increasing the aggregate water storage capacity by 150 percent (31). Three other reservoir projects, one already in progress, will further vastly expand the island's irrigation water

^{1/} Figures released by Taiwan Provincial Government.

^{2/} Preliminary estimated date.

supply when completed (31). Ground water resources have also been developed by drilling of deep wells.

All these efforts may further increase agricultural production to a certain degree and maintain soil productivity.

Growing Population and Industrialization

Taiwan's agricultural production has increased more than double since pre-war days but the island's population has also doubled. The food problem has become more and more acute with the island's agricultural resources being fully utilized and the population increase never stopping.

The most fundamental answer to what appears to be an acute food situation in Taiwan is to slow down the rate of population increase. Birth control should be encouraged and promoted by the Government. Other staple foods should be popularized to prepare for the day when rice production reaches its maximum. Agriculture and industry are closely related and complementary to each other in Taiwan. We need to develop our industries because agriculture alone can not support the present population of Taiwan. Before we can make the necessary progress in industrial development we must first increase the efficiency of our agriculture so as to make it possible to release surplus workers in agriculture to industry.

New Concepts Needed

It is important that the people of the Republic of China should acquire a new concept, a new motive, a new desire and a new sense of values with regard to industries. It is necessary that we discard our passive and conservative concept on the one hand and promote a creative and progressive spirit and greater incentive on the other, so as to break away from the traditional outlook and bonds which have tied the present social fabric to agriculture. We need to industrialize.

As industry increases, making more jobs for people, it will make possible the creation of more commercial farms to take advantage of large scale operation. It is hoped that we shall in the future replace old farm equipment with new and improved equipment. With more commercial farms we will need to improve our warehouse facilities to cope with a new marketing system.

As mentioned in Chapter V, there is no limitation as to the size of the farm operated by owner-operators. When industry becomes fully advanced, more and more farmers who can not get as much income as industry workers due to the small size of their farm will be tempted to sell their land to other cultivators or lease their land out, most likely to the adjacent farmers, and work in other lines of

business that offer them a higher income.^{1/} As this happens farmers remaining on the land will also be able to improve their economic condition as a result of enlarged scale of operation and efficiency.

The Growth of Taiwan's Economy--A Challenge

Taking the period of economic planning as a base for observation, the average annual economic growth rate during the period of 1953-56, or the first four-year economic plan, was 7.7 percent. During the 1957-60 period, it slightly declined to 7.2 percent while during the 1961-64 period it rose again to 7.8 percent (Table 11). This apparently indicates that the rate of development of the Taiwan economy in the last decade has been fairly uniform.

The average annual growth rate of Taiwan economy from 1953 to 1964 was estimated at 7.6 percent based on constant dollars (Table 11).

^{1/} The 1955 per capita income of all people in Taiwan was NT\$2,334 (Table 12) while the per capita income of the farm population was only NT\$1,596 (Tables 7, 8). This general relationship was still true in 1964 when the per capita income in Taiwan was NT\$6,003, while per capita income of the farm population was only NT\$4,723 (Source: Directorate-General of Budget, Accounts and Statistics, Executive Yuan and Sino-American Joint Commission on Rural Reconstruction).

Table 11. Changes in Gross National Product in Taiwan. ^{1/}

Year	Gross national product at current prices			Gross national product at 1952 constant dollars		
	Amount (million N. T. \$)	Fixed base index (1952=100)	Link index (previous year=100)	Amount (million N. T. \$)	Fixed base index (1952=100)	Link index (previous year=100)
1951	10,815	68.68	-	14,018	89.02	-
1952	15,747	100.00	145.60	15,747	100.00	112.33
1953	21,200	134.63	134.63	17,434	110.71	110.71
1954	23,154	147.04	109.22	18,896	120.00	108.39
1955	27,885	177.08	120.43	20,314	129.00	107.50
1956	32,297	205.10	115.82	21,129	134.18	104.01
1957	37,986	241.23	117.61	22,596	143.49	106.94
1958	41,650	264.49	109.65	24,074	152.88	106.54
1959	48,675	309.11	116.87	25,864	164.25	107.44
1960	59,929	380.57	123.12	27,876	177.02	107.78
1961	66,334	421.25	110.69	30,111	191.22	108.02
1962	72,375	459.61	109.11	32,021	203.35	106.34
1963	82,248	522.31	113.64	34,143	216.82	106.63
1964	94,331	599.04	114.69	37,629	238.96	110.21

^{1/} Source: Directorate-General of Budget, Accounts and Statistics, Executive Yuan based on a system of national accounts and supporting tables of the United Nations.

Table 12. Changes in Per Capita Income in Taiwan. ^{1/}

Year	Per capita income at current prices		Per capita income at 1952 constant dollars	
	Amount (N. T. \$)	Fixed base index (1952=100)	Amount (N. T. \$)	Fixed base index (1952=100)
1951	1,063	70.6	1,370	91.0
1952	1,505	100.0	1,505	100.0
1953	1,993	132.4	1,675	111.3
1954	2,024	134.5	1,682	111.8
1955	2,334	155.1	1,718	114.2
1956	2,609	173.4	1,754	116.5
1957	2,915	193.7	1,815	120.6
1958	3,087	205.1	1,854	123.2
1959	3,508	233.1	1,920	127.6
1960	4,237	281.5	2,000	132.9
1961	4,580	304.3	2,094	139.1
1962	4,843	321.8	2,158	143.4
1963 ^{2/}	5,361 ^{3/}	356.2	2,230	148.2
1964 ^{2/}	6,003 ^{3/}	398.9	2,393	159.0

^{1/} Source: Directorate-General of Budget, Accounts and Statistics, Executive Yuan based on a system of national accounts and supporting tables of the United Nations.

^{2/} Preliminary estimates.

^{3/} N. T. \$ 40 = U. S. \$ 1.

However, due to the increase of population, the per capita income in Taiwan was not increasing as fast as the gross national product. The average annual rate of increase in per capita income of all people in Taiwan was estimated at 4.0 percent based on constant dollars (Table 12). According to preliminary estimates, per capita income in 1964 was NT\$6,003, which represents an annual growth rate of 7.3 percent at constant dollars (Table 12) while the annual growth rate of gross national product at constant dollars the same year was 10.21 percent (Table 11).

Agriculture in 1963 still was the largest sector in the net domestic product. Nevertheless, the percentage from agriculture has dropped from 33.8 percent in 1951 to 27.1 percent in 1963.^{1/}

The economic growth of Taiwan has shown that Taiwan's economic development is in the right direction, but it must be mentioned again that unless farmers will save more, and unless rural surplus labor can be removed through a reduced birth rate and through increased non-farm opportunities, the progress likely will be slow and not very significant.

American economic aid is going to cease by June 30, 1965.^{2/}

^{1/} - Source: Directorate-General of Budgets, Accounts and Statistics, Executive Yuan.

^{2/} - Source: Government Information Office, Republic of China.

The people of Taiwan must learn to save more and industry must attract foreign investment in coordination with the Government's new economic and financial policy including an increase in taxation. These are the imminent and important tasks the writer believes necessary to maintain a stable and growing economy to which the land reform program already has materially contributed.

BIBLIOGRAPHY

1. Agricultural policy under the principle of people's livelihood. (Editorial) Central Daily News (Taipei, Taiwan) p. 2, col. 1 thro 10. Dec. 21, 1963.
2. Agricultural production needs further increase. Central Daily News (Taipei, Taiwan) p. 1, col. 7 thro 12. Jan. 7, 1965.
3. Agriculture is Taiwan's life-line. Central Daily News (Taipei, Taiwan) p. 3, col. 1 thro 10. July 16, 1964.
4. Barlowe, Raleigh. Land resource economics. Englewood Cliffs, Prentice-Hall, 1963. 585 p.
5. Bisch, Jorgen. This is the China I saw. National Geographic 126:591-641. 1964.
6. Black, Eugene R. Population growth and economic development. American Journal. March 1962 (Translated in Chinese in International Economic Information Monthly 55:35-38. Nov. 1962).
7. Chang, Hsiu-hai. China's land problem. Taipei, Pa-ti, 1953. 147 p.
8. Chang, Teh-tsui. Agricultural economics. Taipei, Cheng Chung, 1957. 396 p.
9. Chao, Kuo-chun. Agrarian policy of the Chinese Communist Party 1921-1959. Bombay, Asia Pub. House, 1960. 399 p.
10. Chen, Cheng. China's land reform. Taipei, The Free China Review, 1953. 65 p.
11. Chen, Han-sheng. Land lord and peasant in China. New York, International Publishers, 1936. 144 p.
12. China. Republic. Legislative Yuan. Regulations governing the the issuance of land bonds in kind, Taiwan Province. Taipei, Republic of China, 1953. 18 articles.

13. China. Republic. Legislative Yuan. Regulations governing the transfer of government enterprises to private ownership. Taipei, Republic of China, 1953. 9 articles.
14. China. Republic. Legislative Yuan. The land-to-the-tiller act. Taipei, Republic of Chian, 1953. 18 articles.
15. Cook, Robert C. The issue of population policy. (Translated in Chinese in International Economic Information Monthly 55: 15-17. Nov. 1962).
16. Economic outlook in 1965. (Editorial) Central Daily News (Taipei, Taiwan) p. 2, col. 1 thro 10. Jan. 2, 1965.
17. Evans, Robert E. Report from Red China. New York, Bantam, 1962. 280 p.
18. Farmers' income increased. Central Daily News (Taipei, Taiwan) p. 1, col. 12 thro 17. Feb. 5, 1964.
19. Foreign trade analysis. Central Daily News (Taipei, Taiwan) p. 2, col. 14 thro 20. Jan. 4, 1965.
20. Future of Taiwan's agricultural development. (Editorial) Central Daily News (Taipei, Taiwan) p. 2, col. 1 thro 10. Dec. 1, 1964.
21. Goddard, W. G. Formosa. Taipei, Author, 1958. 161 p.
22. Hang, Li-wu. Taiwan today. Taipei, Hwa Kuo, 1956. 154 p.
23. Hsia, Emile C. H. Land use conditions in Taiwan. Taipei, Joint Commission on Rural Reconstruction, 1958. 57 p.
24. Hsiao, Cheng. The theory and practice of land reform. Taipei, Chinese Research Institute of Land Economics, 1953. 80 p.
25. Illinois. University. Land Economics Institute. Modern land policy. Urbana, Illinois, 1960. 449 p.
26. Industry should be emphasized. Central Daily News (Taipei, Taiwan) p. 1, col. 1 thro 5. May 2, 1963.

27. Joint Commission on Rural Reconstruction. General agricultural statistics of Taiwan. Taipei, 1955. 43 p.
28. Joint Commission on Rural Reconstruction. Land use capability survey. Taipei, 1959. 5 p.
29. Kirby, E. Stuart. Rural progress in Taiwan. Taipei, Joint Commission on Rural Reconstruction Press, 1960. 160 p.
30. Kuan, W. L. A study of population aggregate and rate of increase in Taiwan. International Economic Information Monthly 60:9-31. April 1963.
31. Li, Kuo-ting. Economic progress in Taiwan. Taipei, Council for International Economic Cooperation and Development, 1964. 16 p.
32. Li, Kuo-ting. Industrial development in Taiwan. Taipei, Council for International Economic Cooperation and Development, 1964. 20 p.
33. Long-range development program. Central Daily News (Taipei, Taiwan) p. 1, col. 9 thro 13. Dec. 25, 1964.
34. Main purpose of China's land reform. Central Daily News (Taipei, Taiwan) p. 1, col. 1 thro 4. Sept. 11, 1964.
35. Moraes, Francis Robert. Report on Mao's China. New York, Macmillan, 1953. 212 p.
36. Myint, Hla. The economics of the developing countries. New York, Praeger, 1965. 192 p.
37. Raper, Arthur Franklin. Rural Taiwan--problem and promise. Taipei, Joint Commission on Rural Reconstruction Press, 1953. 296 p.
38. Review of Taiwan's economic development. Central Daily News (Taipei, Taiwan) p. 1, col. 7 thro 16. Jan. 3, 1964.
39. Rice production increased. Central Daily News (Taipei, Taiwan) p. 1, col. 8 thro 15. Feb. 20, 1964.
40. Sun, Yat-sen. Three principles of the people. Shanghai, Commercial Press, 1927. 213 p.

41. Taiwan. Dept. of Civil Affairs. Statistics on land ownership classification in Taiwan. Taipei, 1953. 184 p.
42. Taiwan. Provincial Government. Regulations governing the implementation of the land-to-the-tiller act in Taiwan, 1953. 64 articles.
43. Taiwan. Provincial Government. Taiwan's land reform. Taipei, 1963. 52 p.
44. Taiwan's agricultural products. Central Daily News (Taipei, Taiwan) p. 3, col. 1 thro 5. Dec. 9, 1964.
45. Taiwan's farmer and agricultural production. Overseas Fortnightly, Feb. 16, 1964, p. 22-25.
46. Tang, Hui-sun. Land reform in Free China. Taipei, Joint Commission on Rural Reconstruction Press, 1954. 336 p.
47. Ten years since the start of land-to-the-tiller program. Central Daily News (Taipei, Taiwan) p. 1, col. 1 thro 5. May 1, 1963.
48. Tennien, Mark A. No secret is safe behind the bamboo curtain. New York, Farrar, Straus & Young, 1952. 270 p.
49. U. S. Mutual Security Mission to China. Economic progress of Free China 1951-1958. Taipei, 1958. 83 p.
50. Walker, Richard Louis. The continuing struggle; Communist China and the Free World. New York, Athen Press, 1958. 155 p.
51. Wang, Hung-fa. China's economic problems. Taipei, Mainland Today, 1953. 169 p.
52. Yin, Chung-yung. Review of ten years' economic development in Taiwan. Taipei, Council for U. S. Aid, 1960. 107 p.