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RESEARCH NOTES ON AGRICULTURAL CAPITAL FORMATION AND
TECHNOLOGICAL CHANGE

The Ohio State University and the
Joint Commission on Rural Reconstruction/Taipei, Taiwan

Researchers: Dale Adams and Chyau Tuan*
Date: September 1, 1971
Location: Columbus, Ohio

No. 10
Subject: Institutional Savings,
Taiwan

Tentative Title of Study: "Rural Institutional Savings in Taiwan,
1953-1971"

Tentative Completion Date: July 1973

These Notes report on preliminary findings of a continuing research project. The data analysis and conclusions are tentative and formal reference to them should be cleared with the authors.

I - Objectives -

The main objective of this study is to document the mobilization of institutional savings in rural areas of Taiwan during the period 1953 to 1971. This will include measuring the impact which changes in interest rates paid on institutional savings have had on rural savings, and identifying the characteristics of rural savers. While not a central focus of the study, some attention will also be paid to changes in the importance of informal rotating savings-credit societies (hwei) in rural areas of Taiwan.

* Very helpful comments were provided by H. Y. Chen, C. Y. Hsu, T. H. Lee, and other JCRR staff members.

Information on growth of overall institutional savings in Taiwan, savings deposits in farmer's associations, and changes in interest rate policy are briefly described in this note.

II - Data Sources -

Various publications by the Central Bank of China summarize aggregate information on institutional savings. Additional publications by the Provincial Department of Agriculture and Forestry (PDAF), and annual reports by individual Farmers' Association provide further breakdowns on savings deposits in the associations. Some rural savings also go into the Postal Savings System, and private and public banks. Annual reports from these agencies will be relied upon to provide most of this information. The study will focus on a few selected townships for a detailed analysis of rural savers. This will include direct farm interviews. Where possible, the townships selected for detailed analysis will be some of the same ones covered in the study reported in Research Note Number 9 titled: "Farm Level Savings, Investment, and Consumption in Taiwan 1960-1970".

III - Institutional Savings in Taiwan 1953-1970 -

Unlike many developing countries, Taiwan has placed rather heavy emphasis in the past two decades on mobilizing institutional savings. Initially, at least, savings promotion was an important anti-inflationary tool.^{1/} As can be seen in Table 1, total institutional deposits and total time deposits increased at a much faster rate in Taiwan from 1953 to 1970

^{1/} Reed J. Irvine and Robert F. Emery, "Interest Rates as an Anti-Inflationary Instrument in Taiwan". The National Banking Review, Vol. 4, No. 1, September 1966, pp. 29-39.

than did money supply. The increase in deposits in the Postal Savings System and in the Farmer's Associations were also quite impressive. It is further interesting to note that deposits in Farmers' Associations were generally of the same order of magnitude as the loan portfolio held by these associations.^{2/} Institutional savings from rural areas make up an important part of the funds available for agricultural credit.

It is not clear how much of this increase in rural institutional savings is due to increases in agricultural incomes, expansion of off-farm rural incomes, breakdown of the extended family, or changes in the real rates of interest paid on savings. There is little doubt, however, that strong emphasis on providing healthy rates of interest on savings has been a very important factor in growth of savings.

As suggested earlier, during the 1950's high interest rates on savings were used to dampen inflation. During the 1960's emphasis shifted somewhat to offering attractive interest rates in order to mobilize and encourage savings for capital formation purposes. Adjustments in the interest rates paid on deposits were made almost yearly during the last 20 years. An indication of these interest rate adjustments can be seen in Table 2. It can also be noted that despite some early inflationary pressure, savers in Taiwan have been paid a positive real rate of interest on savings in all but three of the past 19 years. In the past ten years institutional savers have realized an average real return of 5 to 6 percent on short term deposits, and 9 to 10 percent on long term deposits.^{3/}

^{2/} In 1970 Farmers' Associations supplied approximately one-third of all institutional agricultural credit in Taiwan.

^{3/} This is in marked contrast to the lack of economic incentives provided to institutional savers in most developing countries. In the past 10 years rates of inflation have substantially exceeded interest rates paid on savings in countries such as Brazil, Chile, Colombia, India, and in fact, the United States.

Table 1. Money Supply, Deposits, and Loans in Taiwan 1953 through 1970
(Year-end balances in current, million NT\$)*

| Year | Money Supply | Total Institutional Deposits | Total Time Deposits | Deposits in Postal Savings | Deposits in Farmers' Associations*** | Loans by Farmers' Associations**** |
|---------------|--------------|------------------------------|---------------------|----------------------------|--------------------------------------|------------------------------------|
| 1953 | 1,683 | 2,827 | 664 | nil | 128 | 103 |
| 1955 | 2,555 | 4,970 | 993 | nil | 234 | 174 |
| 1960 | 6,110 | 14,346 | 4,536 | 234 | 759 | 648 |
| 1965 | 14,845 | 44,260 | 18,161 | 1,536 | 2,894 | 3,184 |
| 1970 | 35,085 | 101,616 | 50,169 | 4,534 | 5,139 | 5,089 |
| Ratio '70/'53 | (21) | (36) | (76) | | (40) | (48) |

* One dollar US was equal to about 15 NT\$ in 1953 and 40 NT\$ in 1970.

** Demand and time deposits.

*** On the average, about two-thirds of this amount was in time deposits.

**** Data for 1965 and 1970 are from unpublished JCRR sources.

Source: The Central Bank of China, Economic Research Department, The Republic of China, Taiwan, Financial Statistics Monthly, July, 1971, pp. 5, 12, 51, 52, 55.

By paying high interest rates on savings, Taiwan has regularly provided its citizens with a profitable alternative to consumption.

In addition to the healthy interest rates, Taiwan has also given some savers an additional tax incentive. Income received from many types of time deposits in official savings institutions is exempt from income tax. This probably adds an average of about 10 percent to the effective value of interest income. This is an advantage, however, that many rural savers do not enjoy. Farmers' Associations in Taiwan lack "legal status" to act as savings institutions, and as a result farmers must pay tax on

Table 2. Nominal and Real Interest Rates Paid on Institutional Savings in Taiwan 1953 to 1971

| Year | A | | B | (A - B) = C | |
|------|----------------------------|---------------------|--|------------------------|-------------------|
| | Nominal Interest Rates on* | | Percentage Change During Year in Wholesale Price Index | Real Interest Rates On | |
| | 3 Month Deposits | 1-2 year Deposits** | | 3 Month Deposits | 1-2 year Deposits |
| 1953 | 21.6 | - | 16 | 5.6 | - |
| 1954 | 16.2 | - | -3 | 19.2 | - |
| 1955 | 10.8 | - | 28 | -17.2 | - |
| 1956 | 10.8 | - | 6 | 4.8 | - |
| 1957 | 10.8 | - | 2 | 8.8 | - |
| 1958 | 10.2 | - | 6 | 4.2 | - |
| 1959 | 9.0 | 19.0 | 11 | -2.0 | 8.0 |
| 1960 | 9.0 | 19.0 | 12 | -3.0 | 7.0 |
| 1961 | 9.0 | 14.8 | 0 | 9.0 | 14.8 |
| 1962 | 7.2 | 14.8 | 6 | 1.2 | 8.6 |
| 1963 | 6.5 | 12.0 | 6 | 0.5 | 6.0 |
| 1964 | 6.0 | 10.8 | -3 | 9.0 | 13.8 |
| 1965 | 6.0 | 10.8 | -2 | 8.0 | 12.8 |
| 1966 | 6.0 | 10.1 | 2 | 4.0 | 8.1 |
| 1967 | 5.4 | 9.7 | 3 | 2.4 | 6.7 |
| 1968 | 5.4 | 9.7 | 2 | 3.4 | 7.7 |
| 1969 | 6.5 | 9.7 | 2 | 4.5 | 7.7 |
| 1970 | 6.5 | 9.7 | 0 | 6.5 | 9.7 |
| 1971 | 6.2 | 9.3 | 0 | 6.2 | 9.3 |

* A number of adjustments have been made in the interest rates paid on time deposits in Taiwan. The nominal interest rate used here was the one in effect during the most months in any one year.

** 1959 to 1968 interest rates are for 2 year Deposits, 1969 to 1971 interest rates are on 1 year fixed savings.

Source: The Central Bank of China, Economic Research Department, The Republic of China Taiwan Financial Statistics Monthly, July 1971, pp. 6, and 73.

interest from savings in these associations.^{4/} Some consideration is currently being given in Taiwan to allowing the strongest Farmers' Associations more banking privileges including tax free status to savers on interest from savings.

^{4/} Most Farmers' Associations in Taiwan were originally organized under Japanese Law which recognized their credit and savings functions. Similar legislation transferred from Mainland China, under which Associations now operate, do not officially recognize savings activities. Curiously, however, associations are required to meet banking regulations on interest rates and capital reserves.

IV - Issues for Further Study -

Serious discussion about rural saving capacity is beginning in government circles. A number of the following issues should be, therefore, of import in this discussion. Findings may also be relevant to other countries which are facing or soon will face similar situations.

- (1) Who is doing the institutional saving in rural areas? What are their socio-economic characteristics? How important is non-farm income in these savings? How perceptive are farmers to economic returns on savings deposits? Do individuals deposit savings in Farmers' Associations on a regular basis? How important are income increases in explaining savings?
- (2) Where are rural savings deposited? What proportion of this goes into Farmers' Associations, Postal Savings, banks, or informal rotating savings-credit societies? What are the trade-offs between financial savings, farm investments and consumption?
- (3) How do various economic incentives affect rural savings deposits? What is the supply elasticity of savings with respect to changes in real rates of interest? Would higher interest rates on savings in Farmers' Associations result in an aggregate increase in institutional savings, or simply draw funds from other institutions? How competitive are returns from deposits in Farmers' Associations with returns from money placed in rotating savings-credit societies? Would a tax break on earnings from deposits in Farmers' Associations significantly alter rural savings patterns? Do the current savings programs offered by Farmers' Associations adequately match the availability of farmers savings?

- (4) What would happen to savings in Taiwan if current policies were altered to allow more purchasing power to remain in rural areas? What would likely happen to consumption patterns? What effect would higher interest rates, deposit guarantee programs, or special tax breaks on earnings from deposits have on aggregate savings in the rural area? Can voluntary savings be an important method of mobilizing rural surpluses in Taiwan?