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Political Economy of Rice in Asia

Report

for the period

September 1974 -- March 1975

A.I.D.
Reference Center
Room 1858 NS

Food Research Institute

Stanford University

Walter P. Falcon

C. Peter Timmer

The "Political Economy of Rice" project began in July 1973. Since that date major efforts have been undertaken to set up a network of Asian scholars working on rice. As a consequence of this collaborative effort, substantial progress has been made in analyzing the rice economies of eight countries (Indonesia, Philippines, South Korea, Thailand, Malaysia, Taiwan, Japan, and the United States). These country studies, which have been useful in their own right, have also produced the information necessary for several comparative studies which are now well under way.

Substantive Progress

Much of the last six months has been spent in bringing together two of the three volumes called for in the contract. During December 1974, one supplementary volume was actually published (Food Research Institute Studies, Volume XIII, No. 2). Containing important essays by Richard Goldman, C. Peter Timmer, and William Collier (and associates), the volume centered on rice price formation, rice marketing, and institutional change in Indonesia.* Early reaction to this group of essays has been very favorable.

A second volume is also nearing completion. It will contain seven essays by collaborators from the Asian countries involved in the study.

* Full citations to all essays referred to in this report are given in Table 2, pages 10-12.

These essays use the "objectives, constraints, policies" framework outlined in the contract proposal, to describe an analytic history of rice policy in the various countries. The lead article by Peter Timmer will provide an overview of the case studies and will also indicate the key lessons to be learned from the study of rice policy in Asia. The country essays are now being copy edited, and the expectation is that a published version of this rather large volume will be available in September. Hence, two-thirds of the formal requirements of the contract will be in published form ahead of the expiration of the work period.

A third area of continuing progress has focused on the development of data. Major compilations of basic rice series have been completed for the Philippines, Japan, Taiwan, Thailand, and South Korea. Preliminary work has also been begun for Malaysia, Indonesia, and the United States. Although these numbers are not likely to be published per se, enough copies of the compilations are being made to supply the leading researchers working on the world rice economy. In addition to the data themselves, these papers contain valuable commentary on how rice data are collected, how reliable various series are, etc.

A fourth area of activity has involved work on special topics related to rice. Dennis Chinn has completed a draft dealing with the welfare of rice producers and consumers under black-market situations. This study uses Japan in the 1950-60 period as a case analysis. Since black markets for rice are an important fact of life in Asia, the

methodology that Chinn develops has broad application. In another essay also having important policy and methodological implications, Peter Warr has written about rice milling in Indonesia. He examines specifically the "choice of technique" question under varying shadow pricing techniques. He presents convincing evidence to show that small rice mills are to be preferred to large bulk facilities in the Indonesian setting.

Three additional papers have been drafted which deal with rice consumption in Asia. Using econometric techniques Gordon Nelson has examined the factors explaining the historic tradeoff between rice and wheat flour consumption in Japan. Fuard Marikar has also looked at rice and wheat consumption in Sri Lanka, particularly with respect to rationing, prices, and incomes. He demonstrates the quantitative impact of several rice policy changes in that country. In a related study, Cristina David has analyzed the determinants of consumption in the Philippines, and has focused specifically on the factors which account for rural-urban differences in the amount of rice that is consumed. All of the consumption papers will be revised this summer for inclusion in the Working Paper Series.

The final area of work called for under the contract involves cross-country comparison. Three articles of a comparative nature have already been produced by the principal investigators. The first essay, "The Political Economy of Rice Production and Trade in Asia," will appear this year in a volume being published by Yale University Press. It

describes the cross-country variations in policy among countries, and attempts to quantify several of the important variables which determine production, consumption, and international trade of rice. These topics are extended in "The Impact of Price on Rice in Asia," to be published in June in a volume on trade and development being edited by George Tolley.

Given the strong interaction between rice production and fertilizer use, a comparative look at the effects of the changed energy and fertilizer situations appeared central to the project. During the past six months, Peter Timmer has thus examined "The Demand for Fertilizer in Developing Countries." This essay, which has since been published in Food Research Institute Studies, examines relationships from numerous Asian countries. It links directly the impact of fertilizer price changes and the world food economy, and suggests that future price adjustments are likely to result in continued high uses of fertilizer.

Two other comparative studies are looking more carefully at the reasons for variations in rice production and yields among countries. Drawing upon micro data developed at 17 different locations by the International Rice Research Institute, Cristina David is in the process of analyzing the price, technology, water availability, farm size, and other factors which account for varying fertilizer applications and resulting rice yields among countries. In a related study, Robert Herdt a collaborator from IRRI, has been using similar data to co-author a study on the differences between actual yields and "potential" yields

in the Philippines. Mrs. David's work will provide the basis for her doctoral dissertation at Stanford, which will be completed this summer, and Mr. Herdt's analysis will appear in a forthcoming issue of Food Research Institute Studies.

Future Work

Work during the next six months will have several different dimensions. Completing the draft working papers mentioned previously will be one priority activity. Other work will center on international trade in rice, on comparative advantage in Asian rice production, on the political economy of rice in both the United States and the Peoples' Republic of China, and, of course, on the final report for the project as a whole.

Two sets of activities will dominate work in the trade area. Three case studies, done on a comparable basis for Thailand, Taiwan, and the Philippines, are being developed as a basis for discussing comparative advantage in Asian rice production. Using domestic resource cost techniques, the case studies will first attempt to answer comparative advantage questions for different regions within each country. Taken together, the studies should also provide a methodological basis for evaluating international advantage in rice production and trade among the countries of the study. The group primarily responsible for these analyses will include Y.K. Mao from Taiwan, Robert Herdt from the Philippines, Narongchai Akrasanee from Thailand, and Scott Pearson, Leon Mears and Walter Falcon from Stanford.

The second portion of the trade work will involve a more formal analysis of the international rice economy. Beginning June first, Ammar Siamwalla of Thailand will be in residence at Stanford for six months and will undertake the leadership in formulating models aimed at forecasting prices and the structure of international trade in rice.

The project also is hoping to produce "political economy" essays about rice in the United States and in the Peoples' Republic of China. Since March 1975, when he joined the Stanford staff, Leon Mears has been involved with an analysis of the United States' rice economy in a manner similar in character to the studies already completed for the Asian countries. Because the United States position in the international rice economy is so dominant, such an analysis is obviously central to understanding the world rice economy.

Much to everyone's delight, Peter Timmer has been invited by the National Academy of Sciences to visit the Peoples' Republic of China in June as a member of the "Small Industries Team." His special concerns will include rice milling, and he hopes to use information that he develops in China for an article on milling and food processing as well as a broader essay about Mainland China's internal and external policies toward rice.

Another general area which is likely to receive attention is the comparative study of rice marketing. Chirmsak Pinthong will be applying to Thailand the model on marketing margins which Peter Timmer has previously developed for Indonesia. Leon Mears will be taking a similar look

at marketing margins in the Philippines. These three case studies should then provide a basis for further comparative comments about the efficiency of rice marketing in Asia.

Finally, substantial efforts will be required to bring all the studies to a close, to write the final report, and to summarize the key lessons that have evolved from the research. The aim is still to complete most of the work by September 30th. Given the fact that Timmer will be in China much of the summer, however, extending the closing deadline through December appears to be a wise move, and will probably be suggested formally at a later date.

Budget

As of March 31, 1975, the Stanford rice project had expended a total of \$151,114. An unofficial break-down of on- and off-campus expenses is shown in Table 1.

As is clear, expenditures are in order, both with respect to total magnitudes and line items.

The next six months will see heavy drawdowns as a consequence of final payments for studies under way in Asia (out of the off-campus budget), and as a result of peak summer activity at Stanford. Moreover, the additions of Leon Mears and Ammar Siamwalla to the Stanford staff on a full-time basis for six months (beginning March 1 and June 1, respectively) will also increase the expenditure rate. As a consequence, a formal letter request is being made at this time for the final transfer of project funds--an amount totaling \$62,160.

Table 1. Rice Project Expenditures through March 31, 1975

	<u>On-Campus Expenditures</u>	<u>Off-Campus Expenditures</u>	<u>TOTAL Expenditures</u>	<u>Project Budget</u>
Salaries and Wages	\$66,674		\$66,674	\$114,600
Staff Benefits	11,265		11,265	19,500
Travel	7,076		7,076	14,000
Commissioning of Papers		15,986	15,986	25,000
Expendable Materials	2,980	0	2,980	7,000
Indirect Costs	41,276	5,860	47,136	82,060
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TOTAL	\$129,270	\$21,845	\$151,114 [@]	\$262,160

[@]Totals inexact because of rounding

One other budgetary item is also deserving of comment. It is extremely important for the group working on the trade and comparative advantage topics to meet together one additional time. A mini-workshop is tentatively planned (pending financial approval) for Taipei in mid-June. Dr. Y.K. Mao, one of the Taiwan collaborators, will act as local host. The relevant group to be involved includes Delane Welsch, Ammar Siamwalla, Robert Herdt, Narongchai Akrasanee, Cristina David, Teresa Anden, Leon Mears, Walter Falcon, and Scott Pearson. Because of the importance of the work on rice trade, it appears that using approximately \$7,000 of project funds for this purpose is a priority matter. Hence, specific letter authorization is also being requested for this purpose. All of this amount can be handled within the current total budget, and most of this expenditure can be borne appropriately by the travel item in the budget.

Table 2. Papers Prepared under the Auspices of the
Political Economy of Rice Project

Stanford

1. D. Peter Timmer and Walter P. Falcon, "The Political Economy of Rice Production and Trade in Asia," July 1973 (to appear in L. G. Reynolds (ed.), Agriculture in Development Theory, Yale University Press, 1975).
- *2. C. Peter Timmer; "Objectives and Constraints in the Formation of Indonesian Rice Policy," September 1973.
3. C. Peter Timmer and Walter P. Falcon, "The Impact of Price on Rice in Asia," September 1973 (to appear in G. S. Tolley (ed.), Agriculture, Trade, and Development, Ballinger Books, 1975).
4. Richard H. Goldman, "Seasonal Production Instability and Price Formation in Indonesian Rice Markets, 1951-1970," Food Research Institute Studies, Volume XIII, No. 2, 1974.
5. C. Peter Timmer, "The Demand for Fertilizer in Developing Countries," Food Research Institute Studies, Volume XIII, No. 3, 1974.
6. C. Peter Timmer, "A Model of Rice Marketing Margins in Indonesia," Food Research Institute Studies, Volume XIII, No. 2, 1974.
7. Cristina Crisostomo David, "A Model of Fertilizer Demand of Asian Rice Farms: Some Micro-Macro Comparisons" (mimeo).
8. Scott R. Pearson and Gerald C. Nelson, "The Measurement of Comparative Advantage in Rice Production," June 1974 (mimeo).
9. C. Peter Timmer, "Choice of Technique in Rice Milling in Java," Bulletin of Indonesian Economic Studies, July 1973, and "Reply," March 1974.
10. Dennis L. Chinn, "The Black Market and the Welfare Aspects of Japanese Rice Policy, 1950-60," February 1975 (mimeo).
11. Peter G. Warr, "Shadow Pricing and Choice of Technique in Indonesian Rice Milling," December 1974.
12. Cristina C. David, "A Comparison of Rural and Urban Consumption Patterns in the Philippines," March 1974, preliminary draft.

13. Gordon O. Nelson, "The Demand for Wheat and Rice in Japan," March 1975, preliminary draft.
14. S. M. Fuard Marikar, "Rice and Wheat Flour Consumption in Sri Lanka," March 1975, preliminary draft.
15. Walter P. Falcon and C. Peter Timmer, "Food: War on Hunger or New Cold War," Stanford Magazine, Fall/Winter 1974.

South Korea

- *1. Pal Yong Moon, "The Evolution of Rice Policy in Korea," June 1974.
2. Pal Yong Moon and Byong Seo Yoo, "A Review of the Crop Production Estimates and Key Statistics relating to Grain Policy (Korea)," June 1974.

Thailand

1. Jittima Pookkachatikul and Delane Welsch, "Thai Rice Premium Data, 1954-1973," January 1974.
2. Yuavares Gaesuvan, Ammar Siamwalla, and Delane E. Welsch, "Thai Rice Production and Consumption Data, 1947-1970," June 1974.
3. Jittima Pookkachatikul, Sopin Tongpan, and Delane E. Welsch, "Thai Rice Price Data," June 1974.
4. Narongchai Akrasanee, "Comparative Advantage of Rice Production in Thailand: A Domestic-Resource-Cost Study," July 1974.
- *5. Ammar Siamwalla, "A History of Rice Price Policies in Thailand," January 1975.

Malaysia

- *1. Richard H. Goldman, "The Evolution of Malaysia's Rice Policy in the Context of Economic and Political Development," March 1975.

Japan

- *1. Yujiro Hayami, "Japan's Rice Policy in Historical Perspective," January 1975.

2. Masao Kikuchi, Keizo Mochido, and Yujiro Hayami, "Rice Statistics of Japan," January 1975.

Philippines

1. Teresa Anden, Data Series on Rice Statistics: Philippines, The International Rice Research Institute, June 1974.
- *2. Mahar Mangahas, "The Political Economy of Rice in the New Society," (Philippines), July 1974.
3. Cristina C. David, The Determinants of Fertilizer Demand and Rice Yields in Asia, partial draft, March 1975 (forthcoming Ph.D. dissertation)
4. Robert Herdt and Thomas Wickam, "Exploring the Gap Between Potential and Actual Rice Yields in the Philippines," forthcoming, Food Research Institute Studies, Volume XIV.

Taiwan

- *1. Hsin-yiu Chen, Wen-fu Hsu, and Yu-kang Mao, "Rice Policies of Taiwan, June 1974.
2. Hsin-yiu Chen, Wen-fu Hsu, and Yu-kang Mao, "Annex Statistical Tables for Rice Policies of Taiwan," June 1974.

* To appear jointly in a special issue of Food Research Institute Studies in 1975.