CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) — PART I

Report Symbol U-447

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
Poor Rural Households, Technical Change & Income Distribution in LDCs. (Contractors: Purdue, Cornell & Michigan State)	931-0594	S&T/AGR

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 81-56 12/2/81

Terminal

☐ REGULAR EVALUATION ☒ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY 76	B. Final Obligation Expected FY 78	C. Final Input Delivery FY 79	A. Total $ 819,000 B. U.S. $ 819,000	From (month/yr.) 1/77 To (month/yr.) 12/79 Date of Evaluation Review 11/14/80

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
This is a terminal PES. All project actions have been completed. Nevertheless, several suggestions for follow-up resulted from the evaluation.		
(a) To improve utilization and dissemination, an executive summary will be prepared and distributed. Thus, missions and others will be able to review the summary, and when they feel that it is useful, could request the report. The summary can be prepared by EPP by January 31, 1982.	S&T/AGR/EPP	1-31-82
(b) The RAC sub-committee recommended additional analyses of the policy implications of the findings of the project. This could be done if funds become available. Such analysis could focus on the impact of trade, taxation, and domestic agricultural policies (especially those affecting incentives to producers).		

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or ☐ Change Implementation Plan
- C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

R. Robbins, Project Manager RR

Clearances: S&T/AGR/EPP:MBlakeney MB Date 10/22/81
S&T/AGR/EPP:RSuttor RSJ Date 10/22/81
S&T/AGR:MMozynski MM Date 11/2/81
S&T/PO:ASilver AS Date 11/6/81

12. Mission/AID/W Office Director Approval

Signature: Kenneth McDermott 12/2/81

Typed Name: Kenneth McDermott S&T/AGR

Date

AID 1330-15 (3-78)

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SUBCOMMITTEE REPORT

This project was conducted jointly by Cornell University, Purdue University and Michigan State University. It was proposed as a joint verture to be based on survey and related data which the three institutions already had collected in African, South American and Southeast Asian countries. The three universities evidently carried out their own individual analyses with the countries and data they already had. Each then prepared separate annual project reports and final manuscripts. Then, a joint summary and synthesis report of 195 pages was written.

The project was approved in a two-phase operation in 1976. It covered the period 1976-78 with major reports being written in 1979. A small one-year extension was requested by Michigan State in 1978. In the first review in March, 1976, RAC posed some questions of methodology, actual integration of the projects, data quality and homogeneity. RAC reviewed the project again in October, 1976 and approved it after receiving assurance from AID staff on data, methodology and project management.

The purpose of the project was to provide LDCs, AID and other donor agencies with a better understanding of the effects on the welfare of the poor by the following: technical change, agrarian structures, availability of public services, effectiveness of labor markets, constraints on the adoption of new technology, trade, taxation and other developmental policies.

The stated objectives were:

1. To compare and contrast production systems, use of time, participation in labor markets and family income under different ecological and institutional environments and at stages of development in selected Asian, African and Latin American countries.

2. To analyze sources and differences in income of poor rural households, including landowners, tenants and landless workers.

3. To analyze the rural labor market with respect to supply/demand behavior, migration and efficiency.

4. To analyze barriers to greater participation of landless workers.

5. To analyze restraints to new technology.

6. To develop and test models measuring the impact of technical change on output, income and employment of poor rural households.

7. To develop and test policy models for analysis of aggregate impacts of trade, taxation and domestic agricultural policies.

8. To identify policy and institutional changes to increase the participation of the rural poor in, and their benefits from, the development process.

Michigan State University had data and made an analysis for three villages in Kano state in Nigeria and samples of nine districts in Sierra Leone. Cornell had data from Central Java in Indonesia, Laguna and Central Lizon in the Philippines, Chitoor District in India and a Nepalese village. Purdue had for Ceara in Northeast and Sao Paulo and Minas Gerais in the Southeast. After the project was initiated, the three institutions submitted semi-annual reports part of the time and annual reports in other years.

The objectives are broad and wide ranging. The analyses of the three institutions similarly are broad. The regions and countries from which the data came are not necessarily a representative sample of the developing world. However, they provide a wide range of agroclimatic conditions and generally reflect populations of low income, small farmers and landless laborers. Subsistence production is important in all of the country regions for which data were available. Typically, data were available on both owned farms and share rented units. The various sample groups also give a range of socio-economic conditions. The three studies do tackle the same general economic and social phenomena. They are not, however, exactly parallel in problems analyzed and methodology applied. They generally relate farm size, tenure, education and location to technology used, use of time, level of income, income distribution, consumption and related variables.

The data used for the analyses were mainly from cross-sectional sample surveys at the different locations. Data of this nature generally has high variance, thus limiting the quantitative techniques which can apply to it.

The strong facet of the study is: It lays out the most detailed data yet available from several world locations on the relationship of technology to income levels and distribution, and the relation of education, land, age, location and other variables to income. Since the data were already available it is well that the study was made to provide deeper and broader knowledge of the phenomena analyzed. The study does not provide all of the knowledge needed in this area, but is a positive contribution worth the cost of the project. A better study and analysis would have been forthcoming had the data initially had been collected for the purpose it was used. However, to have collected new data for the specific purpose would have cost much more and would have required more time.

The project paper proposed the very broad set of objectives mentioned above. The study teams did quite well on the first five but did not

make great contribution to the last three. Objectives 6 and 7 dealt with developing and testing models relating technical change to production, income and employment of poor rural households, and for analysis of the impacts of trade, taxation and agricultural policies. By my criteria, as reflected in the reports, no formal models were developed and tested and trade and taxation policies were generally not analyzed. (Michigan State did sketch a household model in an annual progress report.) The three universities did use a mixed set of quantitive techniques in analyzing the data, but they were not models in the usual use of the terms. Purdue did a large amount of tabular analysis and also used linear programming. Cobb Douglas production functions, budgeting and classical regression analysis of, for example, the relation of income and demand for education to land, age, education, tenure and location. Michigan State used a large amount of tabular analysis and did some regression analysis. It computed some Gini ratios, coefficients of variation and Theil indices to reflect distribution and variances. Cornell used only tabular analysis in its final report (one progress report mentioned that a production function had been estimated in the Philippines.) While refined analytical models were not developed and applied as stated in the objectives, this step probably wasn't necessary and perhaps could not usefully be accomplishedished with the data already available. The three groups probably did about all that was useful with the data, although Cornell might have employed some more rigorous techniques.

With respect to the 8th objective on policies, and the 7th on taxation and trade policies, each of the three studies does have a short section (2, 6 and 9 pages respectively) in the summary, on policy implications. They deal only lightly with trade and taxation policies. Some of those mentioned by Purdue included: removing educational disparities, employment services, migration subsidies, decentralization of industry, removing factor price distortions, credit and marketing facilities, housing, interstate roads and post-migration rehabilitation programs. Those mentioned in the Michigan State report include: developing crop variety packages consistent with the factor endowments of low income producers, credit attached to "minimum input" packages, removal of price distortions, remove export taxes on labor-intensive farm commodities, improve lending institution and reduce interest rates, adjust urban wage rates to better reflect labor scarcity by skill group, improve transportation, health and and village institutions. Cornell mentions the removal of price distortions, the promotion of technologies which improve incomes of all classes but restraint of technologies which worsens the distribution, and the emphasis of scale nuetral technology. The joint summary also treated policy quite lightly.

During its reviews, RAC was concerned that the work of the three institutions be truly integrated or coordinated. There is no great evidence that there was close coordination during the early phase of the project. (The annual reports available do not discuss coordination, etc.)

It is not apparent that there was communication on methodology since each institution seems to have fairly well decided on or used its own quantitative and analytical approach. Evidently, there was agreement on the general form of the final monographs at the three universities. Finally, in the last year, the common report of the three institutions was written. This common report included a summary of the study at each university. It also included a comparative summary of 26 pages for the three studies. While there was some coordination, it was probably less than RAC expected and recommended. More coordination on types of analyses made and quantitative methods used would allowed better comparisons among these several regions and countries over several continents.

Each university evidently used the quantitative techniques it considered best for particular parts of the data it possessed. It is not apparent that RAC's concern over methodology at its October, 1976 meeting had great effects on tightening up or integrating the methodology.

The product forthcoming from these three research projects is an interpretation of types of technical change which do not increase employment and income in developing agricultures; of which socio-economic groups gain or sacrifice from given technical changes; sources of income for small farmers and landless laborers; of the allocation of household members, of time among household and production activities; of the distribution of income as affected by technology and economic, social and institutional conditions; of production systems and resource allocations on small farms; of fertility behavior and investment in child's human capital (i.e., education); and related data. These interpretatations are not all uniformally available in all three studies. The product also includes a small amount of policy analysis. (Perhaps the three institutions should now be asked to make an extended policy analysis from the study results.) The products includes greater quantitative verification of patterns which were simply held previously as propositions or hypotheses. It also includes some analysis of criteria which can or should be considered in the investment or promotion of specific technologies. While the product could have been bigger, it does give A.I.D. and developing countries and institutions better knowledge of interrelationships among technology, income distribution, agricultural productivity, family characteristics and resource allocation. The benefit/cost ratio is considerably greater than 1.0

The results can be of considerable use to A.I.D.'s development assistance program, developing countries planners, and administrators and U.S. institutions which conduct research and technical assistance in behalf of LDCs. The fairly large volume of results should emphasize to planners, administrators, and politicians (a) the need for selecting technologies which can increase productivity without negative equity impacts, (b) types of programs and policies which can prevent negative equity impacts and improve income distribution. Communication of this knowledge can be facilited by (1) publishing a good executive summary which used the results from all three studies and

circulating it widely over the world, (2) having the three universities develop a more extended policy analysis and distributing it quite widely, and (3) having the three universities distribution their total manuscripts quite widely. Certainly all missions should have the executive summary and know that the full reports are available if they wish more evidence.

The three universities did a large amount of work. While not accomplishing all objectives fully (perhaps the objectives were somewhat misleading and called for more than could be accomplished in time with the data available) they have added considerably to our knowledge and the literature relating technology, income distribution and related phenomena for small farms and low income families in developing countries. The data available for analysis was considerable. The cost outlay for this study covering hundreds of households from 10 regions of developing countries was relatively small because it was already available. The research works have analyzed and interpreted a large amount of data in a useful, if not optimum, manner. Development process should be improved as a result of the study.

RAC SUB-COMMITTEE EVALUATION REPORT

POOR RURAL HOUSEHOLDS, TECHNICAL CHANGE AND INCOME DISTRIBUTION IN LDCs

CONTRACTOR: CORNELL UNIVERSITY, PURDUE UNIVERSITY, AND MICHIGAN STATE UNIVERSITY

Subcommittee:
Dr. Earl Heady, Chairman
Dr. E. Skinner
Dr. W. Falcon
Dr. M. Elmandorf

Extract from Minutes of the 70th meeting of AID's Research Advisory Committee (RAC), November 13-14, 1980, Washington, D.C.

Project Evaluation Summary (PES)

BACKGROUND: The project was submitted by Purdue, Cornell and Michigan State as an unsolicited proposal in 1976. Its purpose was "To provide LDCs, AID and other donor agencies with a better understanding of the effects on the welfare of the Rural Poor of factors such as, technical change, agrarian structures, availability of public services, effectiveness of labor markets, constraints on the adoption of new technology, and trade, taxation and other development policies". Another consideration was the opportunity to develop and test methodologies for measuring the effects of rural development and other economic development policies and programs upon the rural poor. The proposal was twice reviewed by AID's Research Advisory Committee (RAC) in 1976 prior to AID's approval.

The principal study areas selected were Sierra Leone and Nigeria (MSU), Indonesia and the Philippines (Cornell), and Brazil (Purdue). Much of the data were already available to the universities through surveys or studies carried out prior to the submission of the project proposal.

EVALUATION METHODOLOGY: For the past year, RAC has been undertaking reviews of completed research projects which RAC had reviewed prior to approval and implementation. This review was based on the report entitled "Poor Rural Households, Technical Change, & Income Distribution in Less Developed Countries", March 1980, submitted by the three universities. This report was reviewed by a sub-committee of the RAC consisting of: Dr. Earl Heady, Executive Director of the Center for Agricultural Development and Economic Development, Iowa State University; Dr. Mary Elmandorf, Anthropologist, Consultant to the World Bank and Fellow of the Research Institute for the Study of Man; Dr. Walter Falcon, Director of the Food Research Institute, Stanford University; and Dr. Eliott Skinner, Dept. of Anthropology, Columbia University. The sub-committee report was presented at the RAC meeting in Washington, D.C. on November 14, 1980, and is attached to this PES.

EVALUATION SUMMARY: The criticism raised by the RAC sub-committee are by themselves, a thorough summary of the project's strengths and shortcomings. In general, the criticisms centered on: 1) An apparent lack of uniformity and coordination in the type of data to be used and the analysis of it, and 2) lack of an analysis treating the policy implications of the project's findings. Despite the shortcomings, the subcommittee report stated that the study "lays out the most detailed data yet available from several world locations on the relationship of technology to income levels and distribution, and the relationship of education, land, age, location and other variables to income. "The sub-committee said the study was a positive contribution worth the cost of the project. There are implicit recommendations for utilization/dissemination of project findings, as well as for follow-up on policy analysis.

External Factors
There were no external factors affecting this project.

Inputs
Not applicable for this project.

Outputs
Three individual reports and one summary report were prepared as required by the project. These reports have been submitted. The summary report is enclosed as an attachment.

Goal/Subgoal
Not relevant

Beneficiaries
The ultimate beneficiaries should be small farm operators. Distribution of the results of this project should enhance understanding of factors affecting adoption of technology, labor market problems, barriers to participation of landless workers, and other problems facing the rural poor. Therefore administrators (AID, contractors, host government official, etc) working directly with the Small Farmer and rural poor should be able to plan programs that will better impact upon the target group.

Unplanned Effects:
There were no unplanned effects on this project.

Lessons Learned
The experience of managing this project demonstrates the problems of coordinating and monitoring projects with several contractors. It is very difficult to obtain consensus on goals, procedures and methods. Over a period of three years, interests of one or more of the contrators may change, leaving a void.

Specifically, on this project, the principal investigator (PI) at two of the institutions changed several times. Thus, the feeling of responsibility to the project was lost. Some assurances that the original P.I. would complete the project needs to be required.

The objectives of the project should be concisely stated, with subobjectives given as necessary. Broadly stated objectives makes it difficult to measure accomplishements precisely.

Some type of improved reporting procedure may be needed for research projects. Interim targets or milestones should be identified in the project paper. These targets could then be used to measure progress as stated in progress reports.

Special Comments or Remarks

Attachment A: RAC subcommittee Evaluation Report

Attachment B: "Poor Rural Households, Technical Change and Income Distribution in Less Developed Countries. A summary Report of Findings From West Africa, Southeat Asia and Brazil."