Markets, policies and the environment in Thai agriculture: is an environment-friendly agricultural transition possible?

A research activity supported by the Ford Foundation, Hanoi, Vietnam.

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Annual Report, April 1999

This project was officially approved in a letter from the Ford Foundation dated April 28, 1998, with a start date of April 1, 1998.

Background
As set out in the research proposal, the goals of the research are

...to generate basic knowledge about the influence of economic growth in general, and major trade and tax policies in particular, on Thai agricultural production and resource allocation, and to combine that knowledge with primary data on agricultural constraints and choices by resource managers in selected study areas to yield a more searching analysis of the microeconomic and environmental implications of present and proposed project and policy reforms.

Specifically, the research proposed to address the following three questions:

1. How do overall economic transformation and policy reforms affect land expansion and land use in Thai agriculture, and particularly in highland areas?

2. How do upland and highland farmers respond to changing wages, prices, and policy signals from the broader economy, and what are the likely environmental implications of their responses?

3. What are the policy and programmatic paths most likely to promote both improved welfare and the maintenance of environmental quality in highland areas?

These questions were first formulated in early months of 1997, immediately prior to the economic crisis that has since engulfed Thailand. At that time, following a decade of sustained and rapid growth, it was evident that a significant fraction of the Thai agricultural labor force was simply walking off the land in search of better pay and conditions in the booming urban economies of Bangkok and regional cities. At that time, the importance of the questions derived from observation that labor scarcity was stimulating more than one type of response at the forest margin. Some agricultural land was being taken out of production (or cultivated much less intensively), with generally positive environmental effects; but in other areas the economic boom was driving a trend towards highly intensive cultivation of commercial crops such as cabbage, potato and strawberry for urban consumers. Some of the shift towards "high-value" vegetable crops was being driven by trade policies—e.g. an import ban on fresh potato (see Coxhead 1997) and this motivated the third question above.

Since then, the Thai economy has entered uncharted waters, especially with respect to agricultural labor and land use. Rural areas have been hit by the loss of remittances from migrant workers; by market failures associated with the economic collapse; by debt service problems, and above all by the need (in many cases) to support additional family members as newly unemployed migrant workers have returned to the village. These changes imply a reversal of the earlier trends away from agricultural
intensification and deforestation. The same three questions posed above remain relevant; however, the altered context has brought new concerns to the forefront. Now, the question of an environment-friendly transition concerns the response of agricultural households (and returning migrants) to renewed—and unexpected—impoverishment. In implementing the research we have adhered to the spirit of the questions, even as the circumstances of Thai upland farmers have changed at great speed.

Research Activities in Year 1
In the year since the project was inaugurated, we have made considerable progress. On the first question, our analysis of secondary data on Thai agricultural land use, wages, prices and migration produced a paper in which we quantify the effects of growth in non-agricultural investment and employment on the agricultural sector. The boom in industrial and service sector growth from the late 1980s to 1996 drew much labor out of agriculture through migration. The effects on agriculture included both a contraction of overall land area, conversion to less labor-intensive crops, and the very rapid mechanization of production in much of the sector. The first two of these trends we suspect to have had favorable environmental effects, since they are associated with reforestation, fallow period lengthening and conversion from annual to perennial crops in upland and some highland areas (our primary data gathering investigates this in more detail; see below). Agricultural mechanization, a rational response by farmers to rising real labor costs, may have had unexpected effects when the Thai economy fell into recession after 1997, since it meant that for the first time, agriculture could not effectively act as a "sink" for underemployed labor. We explore these issues and more in several variants of the research paper, which have appeared as Coxhead and Jiraporn (1998a, 1998b, 1999).

The second research question cannot adequately be answered with secondary data. The other major activity in the project's first year has thus been to design and implement a field survey intended to elicit information about household-level decisions on land use, migration and related investments such as education. After considerable exploration of survey-based literature, discussions with researchers, and several familiarization trips we settled on a study site in the Mae Chaem watershed, in Chiang Mai province west of Chiang Mai city. Mae Chaem has experienced rapid agricultural development and yet still presents many features typical of a frontier area: deforestation, transitions from shifting cultivation to settled agriculture, recent integration of hill tribe communities into the market economy, and so on. Moreover, Mae Chaem has been a large supplier of migrants into urban labor markets in Chiang Mai, Lamphun and Bangkok, so we expect to find significant influences of economic growth on resource allocation, including land use, by households in the region. Moreover Mae Chaem, like other out-migration areas, has experienced some difficulties in the past tow years associated with the return of migrants after the 1997 economic crash. Their return to the community may have led to renewed pressures on the land resource and on forest areas, a subject we are presently investigating.

After initial exploratory surveys by the entire project team, the main responsibility for survey design, sample selection, pre-testing and survey implementation has been assumed by Ms. Jean Geran, a specialist in Southeast Asian rural development and a graduate student in development studies at the University of Wisconsin. Working with a
team of assistants from Chiang Mai University and Mae Chaem district, Jean has surveyed 150 households in 10 villages. The first round of the survey was completed on schedule in early April 1999. The project website (http://aae.wisc.edu/coxhead/lamyai) contains survey instruments, village visit reports, village and household survey data, field trip notes, and a variety of documents setting out sampling and analytical strategies.

Projected Activities, Year 2
In May 1999 the project leaders will meet in Chiang Mai to begin working on the analysis of the data collected in the household survey. While quantitative analysis is clearly one of our goals, we anticipate also deriving in the short term some intuitive conclusions about the factors linking land use, migration, education and other major investment decisions made by upland farm households. The formal and the less formal analyses will enable us not only to draw conclusions about the environmental questions we have posed, but more broadly, to derive insights on the role of environmental resources such as land (or land quality) in the overall welfare of poor upland households.

In Year 2, we will engage mainly in validation and analysis of the data just described. Towards the end of the project period, we plan a set of workshops as well as less formal gatherings at which we will present the results of our research to other researchers, to Thai policy advisors concerned with development and with restructuring, and to Mae Chaem communities. At these workshops and meetings we will present our efforts to address the third of the research questions posed above, that of the policy and programmatic implications of our study.

Project output in Year 2 or shortly thereafter will include several papers suitable for publication in academic and policy-oriented periodicals, as well as Ms. Geran's dissertation at the University of Wisconsin and two or more Masters' theses from Chiang Mai University. We anticipate that several important researchable issues will emerge as we progress with data analysis; some of these are already subjects of discussion with other members of the Chiang Mai and Bangkok research and policy communities.

As an example, one such issue relates to the decisions of newly unemployed migrant workers to return, or not, to their home towns. A decision to return usually means increased pressure on land and other resources in upland and highland areas. What factors drive the decision, and to what extent is the decision susceptible to policy influence? The question is of primary importance in Thailand's current economic situation, since the recession has generated massive open unemployment for the first time in the kingdom's modern history, with major social, political and fiscal consequences. While we are making efforts to interview returning migrant workers within Mae Chaem, to conduct this study would require additional survey work among non-returning migrants.

Contributions to Ford Foundation goals
Our work in this project links "micro" and "macro" economic phenomena by tracing the effects of economy-wide growth and shocks through to the agricultural land use, labor market and educational decisions of rural households in poorly endowed rural areas. This approach is intended to make clear the links between economic development at an aggregate scale and the welfare of specific groups of the poor. Our research is intended to provide information on two particular subjects of great interest to policy makers. First,
we are documenting the sources of rural incomes and the ways in which these are affected by economic boom and bust. This information is necessary both to evaluate the poverty and distributional implications of past growth and shocks occurring in the Thai economy, and—more importantly—to evaluate the resilience of poor rural household's incomes to future shocks. Second, by investigating rural households' land use responses to economic change, we can make meaningful statements about likely future trends in the use of natural resources in upland and highland areas. These insights are necessary if we are to be able to project with any confidence the future trend of income-earning capacity by poor upland households.

Although our research concentrates on communities in Northern Thailand, the themes we address and the methodologies we employ are considerably more general. Our findings will be relevant to researchers and policy advisors concerned with managing poverty and environmental resources in all developing countries of Southeast Asia and beyond.

References


