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# ASSESSING THE IMPACT OF RICE POLICY CHANGES IN VIET NAM AND THE CONTRIBUTION OF POLICY RESEARCH

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## ABSTRACT

The marketing and policy research on rice of the International Food Policy Research Institute (IFPRI) is described, and the conclusions and recommendations that emerged are discussed in the context of the decisionmaking processes in Viet Nam. The role of IFPRI's publication and communication activities in association with the project in informing the policy environment are discussed. It is clear these played a crucial role in building consensus among the disparate groups involved in the policy process. This aspect was widely acknowledged by partners and stakeholders as having high value.

From extensive interviews the author describes the perceptions of partners and stakeholders of the influence of the outcomes of the IFPRI project. They show that the research was regarded as being of high quality, independent, rigorous, and timely. A strong foundation of primary and secondary data gathering and analysis from Viet Nam gave the modeling work on policy options a high degree of credibility among key policymakers. Linking the spatial equilibrium model with income distribution analysis based on national household surveys allowed IFPRI to satisfy policymakers that relaxing rice export quotas and internal trade restrictions on rice would not adversely impact on regional disparities and food security and would have beneficial effects on farm prices and poverty. These were major concerns of policymakers prior to the project. The research on these and other policy options gave a degree of confidence to policymakers that relaxing the controls would be in Viet Nam's national interest. They made these decisions earlier than would have been the case without the IFPRI research.

A framework for the evaluation of policy research and advice is described, which explicitly recognizes the possibility of alternative suppliers of these two components to IFPRI. The framework is used to assess the impact of IFPRI's research with Viet Nam on alternative internal and external trade policies for rice in that country.

The policy assessment framework is used to measure the economic impact of the policy changes, and the contribution of IFPRI's work with Viet Nam on the policies from 1995–97. The relaxation of rice export quotas and internal restrictions on rice trade made by the government of Viet Nam in 1995–97 are estimated to have had a present (1995) value to Viet Nam of $61 million using a 5 percent discount rate. If continued to 2000, this will rise to $222 million and to $966 million by 2020. For an incremental investment of less than US$1 million, a conservative estimate of the benefit to Viet Nam of the IFPRI contribution to the policy changes effected in Viet Nam from the reduction in the policy implementation lag indicates a present value in 1995 terms of US$45 million. This represents a benefit-cost ratio of 56. A more optimistic assessment is that the present value is US$91 million with a benefit-cost ratio of 114. In addition to the welfare gains

to Viet Nam, there were sizeable gains to the rest of the world from IFPRI's contribution. Inclusion of these benefits increases present value and benefit-cost estimates by 34 to 84 percent. Around 40 percent of the contribution of IFPRI is estimated to have accrued to the rest of the world as Viet Nam is now a major player in world rice trade.

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# 1. INTRODUCTION

Public investments in agricultural research can no longer be taken for granted, if they ever could be. The halcyon years following the Green Revolution in Asia saw many studies providing ample testimony of the wisdom of public support for international agricultural research, which was initially justified primarily on altruistic grounds. The many studies of the economic returns to agricultural research investments in both developed and developing countries showed they were wise decisions and that increased investments were appropriate. Spillovers from international agricultural research to donor countries were subsequently shown to be large, and they reinforced the earlier more altruistic rationale. However, despite all of this there is a growing call for more accountability in the continuing use of public funds in support of agricultural research, both national and international.

This paper is a response to the need for evidence of socioeconomic impact from the investments by the donor community in the research and related work of the international agricultural research centers of the Consultative Group on International Agricultural Research (CGIAR). The director general of the International Food Policy Research Institute (IFPRI) commissioned the author to conduct this external study of the returns to policy research, as a part of the ongoing program of such studies within the Institute. In looking at the impact of IFPRI's policy research, attention was also to be paid to the manner in which the information was purveyed and its effect on decision processes.

IFPRI is both a producer of new policy knowledge and a performer of applied policy research with developing countries (Christian and Pardey 1998). This study relates to one of the applied policy projects. It was apparently selected by IFPRI because it was presumed to demonstrate effective collaboration that led to significant changes in rice policies in the country concerned, Viet Nam. Hence, it was not randomly selected and this should be kept in mind.

Evaluating the impact of social science and policy research is a relatively new field of endeavor. Economists have been at the forefront of efforts to develop methodologies for the assessment of the economic benefits to biological and physical research and empirical techniques to quantify them. Hundreds of such empirical estimates are now available. It is ironic that economists have yet to do the same for their own discipline. It is hoped that this paper advances the cause a little, in using a novel approach in a case study of the impact of IFPRI's research with Viet Nam on rice markets and rice policy options. The approach uses benefit/cost analysis to assess the economic value of the time saved in hastening a policy response.

The paper does not explicitly evaluate the intellectual quality of the research per se, except to the extent that it influenced the type and extent of policy information and advice and provided valid ex ante measures of likely impacts on welfare of changes. The

emphasis is on describing how the research was conceived, the socioeconomic and policy environment in Viet Nam at the time, the research outputs, and the recommendations and policy responses that ensued from the decisionmaking processes involved. Extensive interviews with IFPRI partners and stakeholders are described—interviews that elicited their perceptions of the influence IFPRI had on policy responses by the government of Viet Nam. A framework for the evaluation of policy research and advice is described, which explicitly recognizes the possibility of alternative suppliers to IFPRI. The framework is used to measure the economic impact of IFPRI's work with Viet Nam from 1995–97.

## 2. BACKGROUND TO THE RESEARCH

IFPRI first made contact with Viet Nam in 1992 in discussions in France between the Director of the Viet Nam Agricultural Science Institute (VASI) and one of the subsequent IFPRI leaders of the rice policy project. This was followed by a visit to Viet Nam in 1993 by the Director of the Markets and Structural Studies Division of IFPRI to explore the scope for collaboration in agricultural policy research. In 1994, the Director General of IFPRI and other senior management visited Viet Nam again. At this stage, there did not seem to be an effective demand for collaboration from the Vietnamese side, even though the country had embarked on structural and market reforms several years earlier.

### GENESIS OF THE PROJECT

An effective demand arose with an invitation to IFPRI, along with five others, to submit a proposal for technical assistance to the Asian Development Bank (ADB) in the context of an agricultural sector loan to Viet Nam. As with the wheat rationing study in Pakistan, IFPRI was successful in winning a competitive bidding contract (Islam and Garrett 1997, 15). The "rice market monitoring and policy options study" proposal was jointly submitted by IFPRI and Development Alternatives, Inc. (DAI), in May 1995 (IFPRI and DAI 1995). The proposal successfully demonstrated IFPRI's comparative advantage arising from its nonprofit nature, its ability to supplement the technical assistance grant with core funds to enhance impact, knowledge generation that has a lasting impact, the availability of multiple expertise to backstop the project team, and its accumulated experience in working in other countries. The project commenced in September 1995 and was formally completed in March 1997.

ADB designed the project to explicitly involve the Ministry of Agriculture and Rural Development (MARD). The key decisionmaker was the vice minister and the key counterparts were the director of the Department of Agricultural and Rural Development Policy and the director of the Department of Planning and Projection. Apparently these two departments in MARD were not very familiar with IFPRI prior to the ADB project. The Planning and Projection Department was formally designated as the implementing agency and the Department of Agriculture and Rural Development Policy was represented on the Steering Committee. In mid-1996, the new director of the latter department became more actively involved.

## DESCRIPTION OF THE PROJECT

The objectives of the project were to

- ❖ Undertake an in-depth investigation of rice marketing, processing, storage and trade;
- ❖ Analyze the structure of incentives, including the impact of existing interventions;
- ❖ Assess the impact of reforms on farmers, processors, traders, exporters, and consumers;
- ❖ Prepare rice policy options for implementation by the government;
- ❖ Develop a data base on key rice market indicators; and
- ❖ Provide training to staff of concerned government agencies in statistical sampling, survey design, methods, data processing, and economic policy analysis.

The project aimed at building an understanding of the operations of the rice market both within Viet Nam and in terms of the export market. Little research had been done on the rice market prior to the IFPRI study, and the government was eager to examine policy options related to issues like decentralization, infrastructure, marketing costs, deregulation, credit, technology, stocks, price stabilization, and input markets. The objective was to assist the government in making the transition from direct quantitative or fiscal interventions in the rice market to a more market-oriented profile and to further facilitate the dialogue between the ADB and the government of Viet Nam.

Essentially the project undertook a "structure, conduct, and performance" analysis of the rice market and used this to inform the policy process in two ways. The first was to array the data collected in an extensive survey in a manner that described the current marketing channels, their costs, and constraints. The second was to utilize these primary data and other survey data to construct a Viet Nam agricultural spatial equilibrium model (VASEM) to examine many options for changing policies to improve the functioning of the rice market and generate improved economic welfare.

An ambitious series of seminars, workshops, training courses, working papers, and research reports were planned at the outset to ensure the information would find its way to the intended audiences.

The Work Plan called for a 15-month project. It was to involve a total of 22 person-months of IFPRI senior staff time. A three-month extension was granted by ADB to enable IFPRI to conduct a training program in Viet Nam on the VASEM model.

## PROJECT ACTIVITIES

The design of the survey and questionnaire, sampling, and the training of two teams, one for the north and one for the south, was completed in the first part of November 1995. It involved two rounds of interviews with the same set of marketing agents, namely farmers, traders, millers, and state-owned enterprises (SOE). These were spread over 17 of the 53 provinces with 6 districts per province and involved 3,126 respondents in each round comprising 1,388 farmers, 850 traders, 852 millers, and 36 SOE. The survey was completed by June 1996. In April 1996, the involvement of DAI was concluded prior to the data analysis and policy evaluation phases.

In addition to the survey an extensive secondary data base was built up. This consisted of district time series statistics on major crop production, area, yield, prices (farm gate, wholesale, and retail), and seasonal rice exports (prices, quantities, and destinations). All data bases were computerized in a form amenable to analysis by July 1996.

Besides the training of enumerators for the primary surveys, there were five other types of training provided by the IFPRI team:

(1) *Technical*

This included questionnaire drafting, tabulation, data entry, database management, regression analysis, time series analysis, and computer graphics. Ten trainees were involved.

(2) *Food and Agricultural Policy*

Five training modules with extensive courseware were conducted from January to May 1996, with participants from MARD, the Ministry of Finance (MOF), the Ministry of Trade (MOT), the Ministry of Planning and Investment (MPI), the General Statistics Office, and the Government Price Committee. The training included the role of markets, demand analysis, supply response, international trade theory, exchange rates, price monitoring, and market performance. It was aimed at improving the understanding of policymakers and analysts of the features of a market economy. After so long in a command

economy, participants were eager to embrace these concepts, according to Goletti (personal communication).

There were 22 participants in the course, with 25 percent of them women. The average age was 40 years. Most had bachelors degrees and a few had masters degrees, mostly from the former Soviet Union or Central Europe.

(3) *Study Tours*

A study tour in Thailand with senior advisers was organized in June 1996. The aim was to learn from the experience of the world's leading exporter, lessons that would assist Viet Nam in reforming its rice system to improve performance. The Food and Agriculture Organization of the United Nations (FAO) assisted in arranging this tour after some understandable initial hesitation on the part of the Thais.

(4) *Visiting Fellows*

Three visiting Vietnamese collaborators came to IFPRI between April and September 1996. They joined the IFPRI team in analysis and preparation of the final report to the ADB, which was submitted in December 1996.

(5) *Transfer of VASEM*

The extension of the original project from January to March 1997 was intended to transfer and train collaborators in MARD and other ministries in the methodology and techniques of VASEM.

The VASEM uses information on production, consumption, trade, and prices in a seven-region, four-commodity (rice, maize, sweet potatoes, and cassava) model of the food sector in Viet Nam. The model is explained in detail in IFPRI 1997a, 1997b, and 1997d, which were used in the training modules mentioned. The model was used to assess rice export quotas, restrictions on internal rice trade, rice price stabilization, and the long-run prospects for rice exports, against the background of the need to ensure food security and remunerative farm prices, reduce poverty and regional disparities, and enhance export earnings.

Within one year from the commencement of the project, the team began to communicate the emerging results from the surveys and the analytical work associated with the VASEM model. This was indeed a commendable achievement. Commencing in October 1996 and concluding around April 1997, there were a total of three workshops

involving 144 participants. Two were on methodology and one on policy (Table 1). Ten seminars describing the results were delivered in Viet Nam to ministries, research institutions, and universities during the same period. Some 331 people attended these. Six seminars were also given outside Viet Nam at the World Bank, FAO Bangkok, IFPRI, Malaysia, Singapore, and Japan, involving 185 people.

More than 23 reports, papers, and training manuals relating directly to the rice policy project were prepared. A number are contained in the reference list at the end of this paper. One of the most impressive of these was the final report to the ADB (IFPRI 1996). It comprised 535 pages and was completed in December 1996, some 15 months after the initiation of the study. It described the methodology; the background to the study; the structure, conduct, and performance of the internal and external rice market; domestic rice production and postharvest trends; rice competitiveness and food security; and the likely effects of various policy options on welfare. It was translated into Vietnamese in March 1997 to ensure that the partners in the project had full benefit from the work. A book manuscript has also been completed and is currently under review for publication (Goletti and Minot 1997).

The results from the project received good press coverage in 1996 and 1997. At least eight articles appeared during this period in the *Asian Wall Street Journal*, *Financial Times*, *Dow Jones News Service*, and the *Viet Nam Investment Review*.

## PARTNER INVOLVEMENT

A feature of the project was the close association of various institutions in Viet Nam in all phases of the study. The primary counterpart was the Department of Planning and Projection in MARD, with the Department of Agricultural and Rural Development Policy becoming more directly involved as the study proceeded. Also involved were the major research institutions such as the National Institute of Agricultural Planning and Projection, Hanoi Agricultural University, the Institute of Agricultural Economics, National Economic University in Hanoi, Can Tho University, and the Mekong Rice Institute. A number of these institutions were commissioned to prepare reports on the physical, biological, regulatory, and economic environment surrounding the rice sector. Other collaborators included the MPI, MOT, the Government Price Committee, the Bank for Agriculture of Viet Nam, and the General Statistical Office. IFPRI received many compliments during the interviews for having involved so many organizations in the study, which helped immeasurably in building the consensus so critical in effecting the policy changes that emerged from the work.

The project also had a Steering Committee which consisted solely of senior officers from MARD. It was chaired by the director of the Department of Planning and

Projection of MARD. Other members were the director of the Agricultural and Rural Development Policy Department, the vice directors of the National Institute of Agricultural Planning and Projection, the International Cooperation Department, and the Planning and Projection Department.

The Steering Committee met on average about every three months, with the frequency a little higher in the early stages and tapering off toward the end. Advice on the objectives of the study, the survey locations, data sources, and on hiring of staff was provided. The Committee urged IFPRI to focus on policy and marketing issues rather than on production questions and to present a range of options along with implementation plans. It encouraged IFPRI to present as much information in its reports as possible in view of the paucity of data and the novelty of the research methodology to partners in Viet Nam. The relationships between rice export policy, rice production, and domestic food security and the role of the private sector was emphasized by the Committee. The chairman expressed to the author his and the Committee's pleasure at how responsive IFPRI was to the advice offered.

## RESEARCH OUTPUTS

Because the research team was responsive to the concerns of the partners in defining their research agenda, there were many outcomes from the project for policymakers to consider. Indeed it is a challenge to summarize them here but it is attempted under two headings: information and policy options. Most of the material in this section is taken from IFPRI (1996), Goletti and Minot (1997), and Minot and Goletti (1997, 1998).

### Information

The insights generated by the project regarding paddy and rice marketing channels were original and derived largely from the surveys that were conducted in 1995–96. The study found that the overall marketed surplus for paddy was 70 percent, and that more than 96 percent of this was procured from farmers by the private sector. The SOE procured less than 3 percent of the paddy, although they were dominant in the rice export sector. The Mekong River Delta is the most commercialized region with a 95 percent marketed surplus in the rainy season. The average of the two deltas—the Mekong River Delta and the Red River Delta—was 60 percent.

There was limited interregional trade, with most paddy trade occurring within 100 kilometers of the residence of the marketing agents. Rice trade was more interregional than paddy trade. Boats were the predominant form of transport in the south, while trucks

were more common in the north. Traders (assemblers, retailers, and wholesalers) were less than 40 years old and 70 percent were women, with most specializing in the trade.

Most agents relied on personal contacts as the main source of information on regulations and prices. Credit constraints were pervasive and led to short holding periods. For traders this was less than a week, for millers no more than two weeks, and for SOEs an average of four weeks. Rice prices, in general, averaged 70 percent above paddy prices. Only 42 percent of the gap between prices in the north and the south of the country was explained by the costs of transport and marketing. The balance was mostly explained by interregional trade barriers. Only 54 percent of price shocks are transmitted across markets in the country, implying that there is little market integration. The SOEs have marketing costs more than five times higher than those of the private sector.

The share of higher-quality grains in rice exports from Viet Nam has risen in recent years, and Viet Nam's export prices have risen as a consequence. In 1989, less than 1 percent of rice exports from Viet Nam was of a quality with <5 percent brokens; the price received was 65 percent of that quoted for Thai rice of the same quality. By 1995, the share of <5 percent brokens in exports had risen to more than 30 percent, with the price at 89 percent of the Thai equivalent.

In terms of production of paddy, the study found that the domestic resource cost in Viet Nam was among the lowest in the world at 0.4, implying there were considerable real savings in foreign exchange from the domestic production of rice. Production of rice had grown by 5.1 percent annually from 1991 to 1995, with 60 percent attributable to yield growth.

Some 70 percent of all households in Viet Nam grow rice, but 60 percent are net buyers of rice. Among the poor 53 percent are net buyers. Thus, about half the poor benefit from the cheap rice price policy implied by the imposition of the rice export quotas that were in place in the early 1990s. Rural farm households who are net sellers are penalized by these policies. Eighty-four percent of rural households grow rice and 43 percent market some surplus. More poor households sell rice than do producers from rich households, but the differences are small (Table 2). However, the more affluent sell a much larger proportion of their production. Those in the Mekong River Delta stand to gain proportionately more from increased rice prices than do those from other regions, as measured by the Net Benefit Ratio (Table 3).[1] In general, both the urban poor and rich lose from an increase in rice prices, the former proportionately much more than the latter. Similarly the rural poor gain proportionately less from increased rice prices than the rich. The poorest in urban areas represent only 1 percent of the households or 3 percent of the population.

Prior to the study the government felt that the food insecure were net buyers. The results indicated that many of the poor were rice farmers who were adversely affected by rice quotas that lowered rice prices. "In general, the 'cheap rice' policy is more effective in transferring benefits from the rural areas to the urban areas and from the surplus regions to the deficit regions than it is in assisting the food insecure poor" (IFPRI 1996, 400).

**Policy Simulations**

The implicit tax on exports of rice from the official 2 million tons export quota in effect in 1995 was calculated by IFPRI at about 24 percent. Export permits were therefore worth some $64 per ton, with an economic rent primarily to the SOE of $128 million. The VASEM was used to simulate the effects on economic welfare and income distribution of various levels of relaxation of the export quotas. At this stage of the research, it was assumed in the model that Viet Nam's exports would face a perfectly elastic export demand, and hence increasing exports would have no effect on the world price.[2]

Removing the quota entirely was estimated by the model to result in exports of 5.7 million tons, compared with the 1995 level of 2 million. The effects would be to increase national income by $795 million (6 percent) and household income by $932 million (7 percent). Retail rice prices were estimated to increase by 20 percent and rice production by 11 percent. Domestic consumption would fall by 14 percent. Staple calorie consumption would fall by some 13 percent, although there would be some offset from increased consumption of calories derived from nonstaples.

The overall poverty incidence in Viet Nam was estimated to fall by 1.2 percentage points from 25 percent to 23.8 percent from the removal of quota restrictions. Both the rural poor and nonpoor would be major beneficiaries from removal of the quotas, while the urban poor would stand to lose the most (Table 4). Although poor households spend a larger share of their budget on rice, they are also more likely to grow paddy and earn a larger share of their income from paddy sales. The latter effect dominates the former when quotas are removed in the simulations. Those in the Central Highlands would lose in general, as would rural nonfarmers. These groups are large net buyers of rice and could be more than compensated by the additional taxation revenue generated by the policy change. Households in the two delta regions gain more than those living in the other regions. Income inequality in all regions is reduced, except in the Mekong River Delta.

The simulation of the effect of removing all internal trade restrictions on rice showed that national income would rise by 0.4 percent ($62 million), rice production by 0.5 percent, and staple calorie consumption by 0.8 percent. Rice exports would not be

affected. Rice prices in the surplus south would rise 6–7 percent; in the deficit north, they would fall around 10 percent. The urban poor would marginally gain in income (0.2 percent), whereas the rural poor would marginally lose (–0.1 percent). In general, surplus farmers in the south and consumers in the north gain, while surplus farmers in the north and consumers in the south lose from free internal trade. When compared with a 50 percent reduction in transport costs, freeing internal trade generated 40 percent higher total benefits. The two measures combined generated 18 percent higher benefits than the sum of the two individually, which illustrates their complementarity.

The model simulations showed that fixed export quotas stabilize domestic prices when world prices vary. When international prices are steady in the face of variable domestic rice prices, however, fixed quotas exacerbate domestic price instability. Imposition of rice export taxes (and hence variable quotas) leads to less domestic price instability when both international and domestic prices are allowed to fluctuate. But stable prices do not always transform into stable farm incomes. Fixed quotas can destabilize prices when domestic supply is the main source of variability.

The returns to agricultural R&D were shown to be much smaller when rice export quotas were in place. Total national income was $700 million higher with a 2 percent per year paddy productivity growth rate and no export quota, compared with a 4 percent productivity scenario with a fixed 2.8 million ton quota. By 2005, rice exports in the former scenario would rise to 9.4 million tons, some 237 percent higher than the 2005 base run.

## Conclusions and Policy Recommendations

The IFPRI research with Viet Nam had six major conclusions which led to some 13 policy recommendations arising from the data analysis and the simulation of policy options using VASEM. The conclusions were as follows (IFPRI 1997c):

1. ***Future growth of the rice sector relies on rice exports***

   In addition to increases in productivity, future growth of the rice sector depends on a dramatic increase in rice exports. As the domestic market cannot absorb increases in production, the price of rice will decline unless external demand provides an outlet for increased production. If exports are not allowed to expand, farmers will not have the incentive to increase rice production, in spite of sectoral policies that promote agricultural productivity.

2. ***Viet Nam has a big potential for rice exports***

Viet Nam has considerable rice export potential which is seriously limited by a series of constraints related to: (1) the policy of setting a rice export quota; (2) infrastructural bottlenecks aggravated by high port fees; (3) poor quality of rice exports; and (4) lack of transparency and credibility.

3. ***Realizing the potential depends upon the development of private marketing***

Export growth depends on the development of an efficient and effective marketing system able to meet the needs of domestic and international markets at low cost. The development of such a system relies heavily on the participation of the private sector. The private sector has responded strongly to market reform; yet its potential contribution to the rice sector and to national income is still largely underdeveloped.

4. ***Private marketing is still underdeveloped***

Several factors reduce the efficiency of rice markets in Viet Nam, thus reducing the purchasing power of households. The main ones are: (1) policy restrictions on rice flows across regions; (2) barriers to entry in the export sector; (3) limited access to credit for marketing; and (4) limited access to information.

5. ***Targeting and income growth are the best ways to address food security***

Price policy and internal and external trade restrictions are not an effective way to meet the food needs of the poor in so far as they lower the growth of the economy and are not targeted to the food insecure. Targeting and income growth are the most effective ways to address food security.

6. ***Macroeconomic bias against agriculture should be removed***

The positive impact of sectoral policies to promote agricultural growth may be diminished or even reversed by macroeconomic policies that reduce farmers' incentives through inflationary policies and appreciation of the real exchange rate.

The specific policy recommendations that were made to address these issues were described in IFPRI (1996):

1. Progressively increase the rice export quotas until they are no longer binding.

2. Substitute current quotas with export taxes.

3. Give private sector access to rice exports.

4. Dismantle internal policy restrictions on rice movement and freely allow internal trade.

5. Promote rice exports with measures to improve rice quality, reduce shipping costs, and improve Viet Nam's reputation among foreign buyers.

6. Provide access to credit to marketing agents to facilitate procurement operations, storage activities, and investments in processing and transport.

7. Provide access to information on prices, food production, international markets, and the marketing system to a variety of marketing agents, both public and private.

8. Provide a stable and credible policy environment.

9. Monitor macro policies to ensure exchange rate depreciation does not penalize farmers.

10. Target food security stocks and distribution to food insecure households.

11. Target investments in agricultural research to increased yields.

12. Target agricultural research to improve rice quality.

13. Invest in postharvest technology.

In the following pages, an attempt is made to assess to what extent the rice policy research by IFPRI with its Vietnamese partners and the conclusions and recommendations that emerged from their joint work influenced decisionmaking in Viet Nam. The qualitative impact of the work on the policy processes is examined, as well as the quantitative impact on welfare and distribution. The emphasis is primarily on the ADB-supported project, although reference are also made to related work that continued beyond the life of the ADB project. In the next section, we will first explore the policy context and responses in Viet Nam surrounding the project.

# 3. POLICY CONTEXT

To properly understand the context within which the IFPRI research was conducted and disseminated prior to determining the impact of it, it is important to describe the socioeconomic and policy environments. Both conditioned the content of the research and the probability that it would influence the policy processes and responses.

## SOCIOECONOMIC AND POLICY ENVIRONMENTS

Rice is the predominant commodity in the agricultural sector of Viet Nam. Rice currently accounts for 78 percent of the annual crop land and 90 percent of staple food production, which is about one half of agricultural production. Agriculture, forestry, and fisheries account for 29 percent of GDP, down from 50 percent in 1986. Some 75 percent of the labor force is engaged in this sector, and it contributes more than half of the value of exports. Rice contributes 75 percent of the calorie intake of Vietnamese households and almost 30 percent of the value of consumption expenditure.

During the French colonial period in the 19th and 20th centuries, rice exports rose, reaching 2 million tons in 1928. This was considered to have contributed to famine. Goletti and Minot (1997) suggest that this and later famines after World War II probably contributed to the sensitivity of policymakers to the effects of rice exports on the well-being of the poor. They calculate the correlation between per capita consumption of rice and exports to have been –0.48 between 1912 and 1944. By the time the French left in 1954, rice exports were down to 0.15 million tons. By 1995, they were back to 2 million tons. The share of rice in exports has varied between 13 and 20 percent.

In 1989 Viet Nam began once again to increase rice exports, after importing 1 million tons each in 1987 and 1988 (Table 5). This followed the liberalization program, which commenced in 1981, with the contract system replacing collectivization of agriculture. This allowed farmers to cultivate individual plots and sell above-quota surpluses on the free market. Then followed the *doi moi* (renovation) policy in 1986, which announced the government's intention to encourage the development of the private sector; to give greater priority to agriculture, exports, and consumer goods; to reduce inflation by correcting budget deficits; and to promote international trade.

Specific Resolutions of the Politburo which encouraged agriculture occurred in 1988 with the acceptance of the household as the basic unit of agricultural production. Farmers were allowed to buy, own, and sell agricultural inputs such as machines, buffaloes, and tools. Cooperative land was assigned to farming households for 10–15 years. In 1989, subsidies and price controls were eliminated, fiscal policy was tightened, gold trading was legalized, positive real interest rates were established, a unified and devalued exchange rate was put in place, and international trade was liberalized. In 1991,

the export duty on rice was reduced from 10 percent to 1 percent, imported inputs used to produce exports were exempted from duties, and the Agriculture Bank of Viet Nam was allowed to lend to households. Individual property rights were further strengthened in 1993 allowing farmers to exchange, transfer, lease, inherit, and mortgage land. Rice continued to be the only commodity subject to export quotas. All other quotas were removed in 1995, although as discussed later, rice export quotas were substantially increased from 1996.

These and other policy changes led to a growth in rice production of 5 percent annually in the period 1985–95. Yield increases contributed 57 percent of rice production growth, improvements in cropping intensity 38 percent, and their interaction 8 percent. The cultivated area of rice declined during the period and contributed –4 percent to the growth in production. In 1995, the cultivated area of paddy was 4.2 million hectares, the yield was 3.69 tons per hectare, and production was 25 million tons. Some 85 percent of paddy land is irrigated, and it has a cropping intensity of 2. Viet Nam has commenced to cultivate hybrid rice, and there is currently some 50,000 hectares sown.

Between 1989–95 real prices of paddy and rice declined annually by 3.1 and 4.5 percent, respectively, but price variability fell significantly. The price decline was primarily because of high domestic inflation and a decline in the real exchange rate of 12.5 percent per year, against the background of a rice export growth rate of 8.4 percent annually during the same period (Table 5). The rice competitiveness index fell 5.5 percent per year during this period. IFPRI estimates are that had the real exchange rate stayed the same, price incentives for rice producers would have risen by 7 percent per year. Goletti conveyed this to MARD to assist it in dialogues with MOF and MOT regarding the pervasive effect of macroeconomic settings on the rice sector.

Thus overall socioeconomic environment in Viet Nam in the years preceding the IFPRI involvement could be characterized as dynamic. The rice sector was flourishing in terms of production and productivity, in spite of unfavorable price trends. Incentives for private enterprise in agriculture were having significant effects on rice production and trade. IFPRI was not entering a command economy in decline; but rather an emerging or transition economy much like China some 10 years earlier. There was hence a receptiveness to the insights to be gained from research that addressed the policy environment surrounding a strategic and economically important food crop like rice, especially with an institution versed in the traditions of market economies, of which they had little experience.

The government of Viet Nam had clearly embarked on a rice export strategy well before IFPRI arrived on the scene. Yet there was concern about continuing declines in paddy prices for farmers, poverty and food security aspects, interregional and rural-urban

disparities, and the linkages among all of these and their relationship to rice exports. These were strongly conditioned by earlier experience, especially with food security.

However, Goletti and Minot (1997, 6-6) maintain that overall, the expansion of rice exports since 1988 has not occurred through the reduction of domestic consumption. Rather, increased production has allowed domestic expansion of exports combined with smaller increases in domestic per capita rice consumption.

## POLICY RESPONSES

It is informative to juxtapose the chronology of major rice policy changes that were made by the government of Viet Nam since IFPRI first initiated contact in 1992 to the activities of and outcomes from IFPRI rice policy research. This is arrayed in Table 6.

It is clear that the government of Viet Nam embarked on a policy of increased rice exports prior to the IFPRI involvement with Viet Nam. However, it seems that a figure of 2 million tons was seen as an upper limit in view of concerns about the effect of higher levels on food security. In late 1996, IFPRI began to actively communicate the results of its research through papers, workshops, and seminars. This happened to coincide with a period of falling rice prices which triggered farmer agitations in the south. As a result, intense discussions took place within and among ministries and the Government Office about price policy, exports, and internal trade. In all of this, the MARD was the major protagonist for liberalization, and as it was IFPRI's formal collaborator in the rice policy project, it made explicit use of the emerging results from the joint study, especially that which showed that Viet Nam could export up to 5 million tons without impairing food security or exacerbating poverty and with considerable benefits to farmers. More will be said about this relationship in the following section.

In the event, rice exports rose to 2.9 million tons in 1996, even though there was a *de jure* quota of 2 million tons at the beginning of the year. A crisis did not result, and in early 1997 decrees by the Prime Minister raised the quota to 3.5 million tons, removed the monopoly of the SOE in rice exports, lifted internal trade restrictions on rice, dropped licences and controls on transport, and removed wholesale taxes on food. The MOT and MARD were given the joint responsibility to regulate exports of rice.

In 1998, the quota was further raised to 4 million tons and private-sector participation in rice exports was allowed. At the time of writing, the government had curtailed further exports in 1998 because there was concern that pro rata they were likely to exceed the announced annual quota. The government had in recent years announced the annual quotas in February-March and made provisions for modifying them in the light of emerging trends, if necessary, in September. This was to ensure that food security was

not jeopardized. In 1998, the temporary correction occurred three months earlier in June, partly because of a drought in the north. Expectations are that, in spite of this intervention, exports for the year will still reach 3.8 million tons.

There is still no trade allowed in the export quotas, and the rice export tax is currently zero. However, the MOF reserves the right to impose export taxes depending on the demand and supply situation. The creation of a market monitoring function within the MARD is consistent with the finding in the IFPRI study that price discovery by market participants is rudimentary. IFPRI played an advisory role in the early stages of this innovation. Currently the system is tracing domestic, border, and international markets for some 10 agricultural commodities, using national and international data bases, intranet, and internet.

# 4. PERCEIVED INFLUENCE OF IFPRI

It would appear from the discussion in the previous chapter that a number of the conclusions and recommendations from the IFPRI study found their way into the policy arena. However, it is an altogether heroic step to assert from this congruence that the policy changes were the direct result of IFPRI influence. Indeed, others were involved and it is important to recognize this.

If one is to attempt to relate the work of IFPRI to the policy changes that took place and are continuing to take place, reference to partners and stakeholders is necessary. Their perceptions about the policy environment and the role that IFPRI research played in the processes surrounding the policy changes is critical in assessing whether IFPRI made a difference. In doing this, it is important to appreciate that there are understandable sensitivities involved, which can cloud the attempt at attribution. One does not wish to compromise IFPRI's ability to collaborate effectively in the future in Viet Nam or elsewhere by inappropriately crediting IFPRI with impacts that rightly belong to others or are joint. IFPRI's management is well aware of this.

## PARTNER AND STAKEHOLDER INTERVIEWS

In August-September 1998, the author undertook a series of interviews with some 35 persons who were either partners in the research endeavor or stakeholders in the outcomes. A list of those interviewed is contained in Appendix 1. A list of 38 questions was drafted based upon a reading of the documentation associated with the study and from discussions with the primary IFPRI staff involved. These questions covered capacity-building and training, the policy environment, the demand for IFPRI involvement, the communication of results, the policymaking impact, and new information and insights (Appendix 2).

The interviews were conducted without the presence of IFPRI staff. In Viet Nam, the IFPRI staff member who accompanied the author to the country introduced him to those being interviewed and gave a brief background of the reasons for the impact study. He then left the room. Where necessary an interpreter was present. He was the primary counterpart in the study with IFPRI from the Department of Science and Technology of MARD. This facilitated discussions in ways that an interpreter with no knowledge of the project could not have done. Admittedly he may have exerted unintentional influence on the interviewees, but the author was satisfied that this did not affect the objectivity of the exercise. Each interview took no more than one hour in general. The list of questions in Appendix 2 was used as a guide and prompter in conducting the interviews. At the interviews the questions were tailored accordingly to the interviewee, because not all were familiar with every aspect of the study or its influence.

It is clear that the IFPRI study is perceived as providing original insights into the rice sector in Viet Nam, with many people who would be regarded as informed being surprised about a number of the findings (Table 7). Prior to the study, there was not a detailed understanding of the sector, nor was there basic information on aspects such as trade flows, marketing channels and margins, costs of production of paddy, price differentials within and without the country, and transport costs. By judiciously combining primary and secondary data in standard "structure, conduct, and performance" analysis, IFPRI was able to illuminate the policy environment with new and relevant information. This undoubtedly set the stage for a receptive audience for the policy conclusions and recommendations.

Many decisionmakers stressed the importance of the surveys and the primary data analysis that followed in establishing the credibility of IFPRI to be able to address policy issues in Viet Nam, and for the outcomes to be seriously considered by them. The study "changed the level of dialogue in Viet Nam" (Interview 1).[3] Its quantitative nature was regarded as a first and its employment of VASEM to address key issues as powerful. Other modelers were seen as too academic. Indeed, key decisionmakers in MARD requested IFPRI to examine many options because the quality of the data and model gave them confidence. In time, they became advocates for the policy recommendations that were emerging from the study, well before the publication of the final report in December 1996 (IFPRI 1996).

The originality of the study also derived from its use of competitive market economics to address policies. Many senior policy analysts in Viet Nam were trained in the former Soviet Union. The younger analysts, who are now returning to Viet Nam with M.S and Ph.D. degrees from the United States, Europe, and Australia, saw the IFPRI study as a reinforcement of their newly acquired skills. Indeed a number of current M.Sc. students are using the IFPRI data. The lifting of the U.S. embargo on Viet Nam in 1995 and the country's membership in the World Trade Organization and Asian Free Trade Association were also seen as opportunities to embrace competitive market concepts. The transition from a command to a market economy was assisted by studies like that of IFPRI. Others who contributed to this transition included the Harvard Institute for International Development and the Centre for International Economies in Canberra.

There was strong agreement that the IFPRI study had an influence on the decisions about relaxing rice export quotas, involving the private sector in exporting, and removing internal trade restrictions (Table 7). No one claimed that IFPRI was the sole influence on these policy changes, but rather that it was a key strategic input into a policy process that involved many actors and vested interests (Figure 1). The 19 workshops and seminars that were conducted by IFPRI were regarded as crucial in building the consensus that is required in Viet Nam before such policy changes are effected. There is not one policymaker or institution but rather a diffuse mechanism, and IFPRI's

independence and the quality of its research and extensive communications facilitated the arrival of consensus on these policy issues. There was "very hot discussion," and the IFPRI study added confidence that there would not be unwanted or unexpected consequences from change (Interview 18). Not only that, but the advice was most timely. Indeed, many felt that these changes occurred much earlier than they would have without the IFPRI study. More will be said about this in a later section of this paper.

There has been a suggestion that the ADB, who commissioned the study, made relaxation of controls on rice a condition of the release of further funds in a sector program loan. It has not been possible to verify this from the ADB, but it was certainly not the impression one received from discussions with Viet Nam's policymakers. Another view, by an alternative supplier of policy advice to Viet Nam, was that there was a conspiracy between the World Bank and the ADB to influence liberalization and that IFPRI was the "instrument" (Interview 10).

A number of interviewees felt that the choice of MARD as the partner in the project facilitated the subsequent influence on policy processes and policy formulation. One alternative may have been for IFPRI to collaborate more directly with research institutions like VASI, the Institute of Agricultural Economics, or the National Economics University, which may have had the advantage of enabling the research and data bases to be better institutionalized than it appears was the case.[4] However, this may have come at the expense of short-term impact, where the institutions are not explicitly integrated into the decisionmaking process. In this context, it is important to note that the recommendations for the relaxation of internal and external controls on rice to the Prime Minister came from the Minister of Agriculture and Rural Development. MARD is now regarded as the leader in the formulation of agricultural policy, significantly because of its collaboration with IFPRI.

Training was regarded as a strong feature of the project (Table 7). No one was negative about it, but there was almost universal agreement that much more is required and that it should be continuous. Many thought the study was excellent in both content and quality and that the government was making extensive use of it. "Everyone is using it" and it was a "landmark study" (Interview 1). The presentations in the seminars and workshops received high praise: "Dr. Goletti was serious yet cool, objective, and humble; not pushy." (Interview 10).

One of the more influential aspects of the study was said to be the work that showed the effects of relaxation on rice export quotas on poverty and food security (Table 7). It will be recalled that these were major concerns of policymakers, and the IFPRI study certainly seemed to satisfy them about this aspect. Apparently, decisions about whether to invest heavily in additional rice storage to accommodate the expected growth in stocks were being considered at the end of 1996 at the same time as export

quota relaxation was being debated, against the background of the conclusions and recommendations of the IFPRI study. Indeed, these were seen to be alternatives in some sense. In MARD discussions at the time, issues related to possible price rises and food security effects were paramount. There was comfort taken in the IFPRI conclusions that, while price rises were likely to occur if quotas were increased, this would not compromise the poor or food security. Provision was made to increase wages of government employees in urban areas to compensate them if need be. To ensure a smooth transition, the decision was taken to ease the quotas only gradually.

A measure of the value placed on IFPRI in Viet Nam is the fact that after the ADB-supported study on rice price policies was concluded in March 1997, further studies involving a number of donors and partner institutions were commissioned involving the Institute. These covered commodity diversification, poverty mapping, starch development, and food processing (Tables 6 and 7). If the IFPRI contributions on rice policies were not seen to be helpful, it is doubtful if such a derived demand would have occurred.

There has been only weak support evident from the interviews that the conclusions about rice export taxes and targeted programs for the poor in the IFPRI study have been influential in effecting change (Table 7). Rice export taxes have been revised up and down over recent times and currently the rate is zero. There does seem to be greater attention to deficit regions to ensure that rice supplies are in stock and special programs for the poor have been strengthened.

While IFPRI was conducting the study with Viet Nam, the capacity of MARD to undertake policy analysis was strengthened, but it has not been a lasting impact (Items 10, 15, and 17, Table 7). This is unfortunate because the credibility and reputation of IFPRI was in fact enhanced in Viet Nam during the course of the study, and there is now an unmet demand. For example, there were requests that IFPRI expand the model to accommodate livestock, other crops, and inputs. The commissioned studies involving IFPRI that followed the original rice study are not a perfect substitute for a continuing presence in key institutions to help maintain and update data bases, give training courses, refine models, and be responsive to emergent policy issues. It seems no institution or individual is currently able to run the VASEM, and only one or two have ever tried. The officers in MARD who worked most closely with IFPRI in the study have other priorities and pressures that preclude them from taking the major responsibility for keeping VASEM operational and relevant.

Ancillary conclusions and recommendations from the study related to the importance of macroeconomic policies on rice competitiveness, credit constraints, and the effect of quotas on domestic price stability were not viewed by respondents as being very influential (Table 7). Key stakeholders like the World Bank did make explicit use of the

data and findings. For example, the Bank's draft Viet Nam rural development strategy document has five citations to IFPRI's work in Viet Nam (World Bank 1998). The reference list at the end of this paper indicates a total of 16 papers were prepared related to the rice study. This excludes training manuals. The press coverage was not noted in the interviews as being significant.

## DECISIONMAKING PROCESSES

On rice and related policies, MARD is the preeminent ministry. But because a major issue like rice exports was involved, both the MOT and the MOF were also key actors (Figure 1). Within MARD, the director of the Department of Agricultural and Rural Development Policy was the focal point of advocacy for change. MARD and MOF both were concerned about the power and economic rents being earned by the SOE from their rice export monopoly. MPI was also involved in the decisions, as rice is a strategic commodity and important in the economy. The Central Institute of Economic Management within MPI was especially involved because it plays a key role in the whole reform process that is under way in Viet Nam.

International stakeholders like ADB and the World Bank played an indirect role in the processes underlying the decisions described in Table 6. They undoubtedly made effective use of the IFPRI study. However, it is not clear that their “leverage” was instrumental in directly affecting the nature of the changes or the timing. They, like IFPRI, were one of the many players influencing the process. Apparently FAO and the United Nations Development Programme were much less explicitly involved in the decisions that were made.

The Government Price Committee was an important player in the process, as it is within the Government Office arrangements, which are between the ministries and the Prime Minister's Office. They were kept informed of the study and participated in the seminars and workshops. The SOE were understandably somewhat antagonistic to the outcomes of the IFPRI study but did allow the initial survey to include a sample of the SOE.

There were many other domestic stakeholder institutions that were associated with the IFPRI study in some way, either directly, as a collaborating partner like the National Institute of Agricultural Planning and Projection, or as a peer or mentor, such as the universities.

The extensive series of IFPRI seminars and workshops that took place as results were emerging were able to reach most of the agencies arrayed in Figure 1. Copies of the final report to the ADB in English in December 1996 and in Vietnamese in March 1997

followed (IFPRI 1996). As with the study of the impact of IFPRI's research on food ration shops in Pakistan, conducted by Islam and Garrett (1997), the influence of the research was felt well before the formal publications arising from the study appeared. The influence stemmed from the effective oral communication of research results and advocacy of policy changes to disparate audiences, who subjected them to peer scrutiny.[5] This process itself built up confidence among decisionmakers to effect the changes, as they became assured that all those with vested and other interests were hearing the same messages from an independent and reputable international organization. Resolutions from the plenums of the Communist Party and decrees from the Office of the Prime Minister resulted. The plenums establish broad strategies and policy directions. The timing and content of policy is primarily the responsibility of the Prime Minister on the advice of ministers and the Provincial People's Committees.

The sphere of influence of IFPRI on the policy processes in Viet Nam related to the rice issues was hence wide and pervasive, which was appropriate given the diffuse and participative nature of the decisionmaking environment.

## 5. ESTABLISHING THE IMPACT OF IFPRI

It is clear that the perception among partners and stakeholders is that IFPRI had an important and timely influence on the decisionmaking processes surrounding recent changes in rice policies in Viet Nam. How can this be translated into measurable impact? Is it appropriate to attempt to attribute elements of welfare-increasing impact to IFPRI in this way, when it was only one of many players? Were there other potential suppliers of the information and advice that emerged from IFPRI's work with Viet Nam? Did IFPRI offer a differentiated product from these alternative suppliers? This chapter attempts to address some of these questions.

### A FRAMEWORK FOR VALUING POLICY RESEARCH, INFORMATION, AND ADVICE

Assessments of the returns to biological and physical research, especially directed at agriculture, have been numerous and well documented. Alston et al. (1998) recently reviewed 294 such studies and found that 95 percent of the estimated rates of return were in the range of 0.4 to 1,480 percent. The average return was 58.6 percent. While there are many methodological and empirical challenges associated with these types of studies, economists and their agricultural science colleagues have been able to contend with most of them. Alston, Norton, and Pardey (1995) have effectively addressed these issues, although in a recent seminal paper, Alston, Craig, and Pardey (1998) question whether rates of return estimates from econometric studies like those mentioned above may have been consistently overestimated because of an inappropriate specification of the research lags. They argue that the typical arbitrary restrictions on the length and shape of the R&D lags generate high returns, and they imply that the stock of scientific knowledge depreciates to zero in time and that this is not what we observe. They maintain that free-form dynamic and flexible lag structures are the more appropriate specifications. Applying this type of specification on the data set for aggregate U.S. agriculture, they find that the conventional specification is rejected in favor of a more flexible, dynamic alternative model in which the productivity effect lasts much longer than previous studies. This leads to a rate of return of less than 10 percent, compared to near 50 percent with traditional approaches.

Another way of interpreting the Alston, Craig, and Pardey (1998) arguments is that benefit-cost studies of research investments underestimate the costs that have been incurred previously in generating the body of scientific knowledge upon which researchers draw in undertaking the incremental research endeavor. But if the research costs in generating such knowledge are already sunk, then it would seem appropriate to evaluate investments at the margin without taking account of historical investments, especially when the purpose is to assess the contemporary worth of an individual institution's research portfolio. Indeed, it is not clear if Alston, Craig, and Pardey (1998) imply that their criticisms of rates of return studies are only limited to those employing

econometric techniques to aggregate time series or cross section data, or whether they also apply to those that examine particular applied research investments or projects, as in this study. It would appear that they are not able to differentiate adequately between research investments at the more basic end of the research spectrum and those at the applied/adaptive or near-market end. However, they do acknowledge (pp. 28-29) that more applied research may indeed have much shorter lags than more basic research.

These contemporary methodological issues aside, it is a fact that there have been few studies that have attempted to evaluate the returns to social science or policy research. This has been a challenge, not the least because the results are not embodied in a final product like so much biological or physical research. Often the products of social science and policy research come in the form of new data, information, knowledge, and sometimes wisdom, aimed at influencing human endeavor. Understanding causes and effects hence is difficult.

Lindner (1987) views the information from social science and policy research in a Bayesian framework. Information reduces the opportunity costs of wrong decisions, which amount to uncertainty. It also reduces the costs of perceived or real risks. Increases in information and in its accuracy, reliability or precision, increases its value in the sense of reducing the expected value of perfect information. The IFPRI work in Viet Nam would qualify as detailed, in depth, and comprehensive in the sense that it canvassed many policy options and subjected the results to a large number of sensitivity analyses to test the robustness of the conclusions. Implementation delays with policy research are likely to be long according to Lindner. In Viet Nam they were minimal, no doubt due to the socioeconomic and policy environments described earlier in this paper, but due significantly to the timeliness of the IFPRI work and its nature.

Babu and Mthindi (1995) bemoan the fact that decisionmakers often do not use information in making policy decisions. Too often decisionmakers are involved in "firefighting," with little time for informed decisions. Paucity of data is also often a handicap to policy formulation. In Viet Nam fortunately neither was the case. Babu and Mthindi separate the benefits of policy research into pre- and post-decisionmaking benefits. The former involve improved processes related to capacity building and institutional strengthening. The latter are evaluations of the primary and secondary impacts of the policies that emerge. They measure costs and process benefits but do not attempt to measure impacts. The "process benefits" from the IFPRI research with Viet Nam have been described in earlier sections of this paper. Later we will attempt to measure the impacts.

Garrett and Islam (1998) suggest that social science evaluation should only look at outputs, processes, and *potential* outcomes, rather than focusing on *actual* policy outcomes. They maintain it is difficult to establish a direct link to the policy impact of

social science research and that often the research contributes to a body of knowledge that policymakers access when and if they see fit. In the case of Viet Nam, it seems clear that the environment was already conducive to policy change. The IFPRI study also had the four features Garrett and Islam attribute to Weiss (1980) that policymakers find useful: (1) research quality, (2) conformity to expectations, (3) action orientation, and (4) challenge to the status quo.

It is contended here that evaluating the quality of the research output and the processes by which a research institute carries out and communicates its research findings is a necessary but not a sufficient condition for judging impact. Garrett and Islam maintain that it is sufficient. One must also look at post-decision impacts if an institution is going to be able to differentiate its product from others and sustain funding support.

Park (1998) proposes a cross-country econometric approach to the measurement of the benefits of policy-oriented research. On the assumption that social welfare can be equated with economic efficiency, he describes a simultaneous equations model where policy research in a country generates knowledge that improves the quality of policy, which then impacts on economic growth. Dollar and Pritchett (1998) provide clear empirical evidence that sound macroeconomic and trade policies in developing countries substantially increase economic growth and reduce poverty.

In this author's view, IFPRI can be regarded as an institution that contributes to the body of international social scientific knowledge through the quality assurance processes of independent peer review. This knowledge includes mostly goods of a public nature at the basic-strategic end of the research spectrum. Because of the quality of its staff, it can also draw on the same body of knowledge to build a reputation and credibility that enables it to respond to requests for collaboration on more applied aspects of social science and policy formulation in a timely fashion, bringing the best of methodology and analysis to bear (Figure 2).

IFPRI's unique role and character is described in the recent study by Christian and Pardey (1998). Their bibliometric analysis compares IFPRI's publication output with five other institutions who also conduct policy research. IFPRI compares more than favorably with the others using most measures of contribution to the scholarly literature. They found that IFPRI effectively conducts both applied and more basic research, provides a linkage between developed- and developing-country scholarly communities, and contributes to the more rapid transfer into practice of new policy knowledge because of its ability to act as an intermediary between scholarly communities and policy clienteles. IFPRI's published work is cited to a similar extent to all of its comparators in the study, and all are cited more often and more widely than are economics papers in general. The Stanford Food Research Institute had a significantly higher citation rate, although a lower scholarly publication record, than IFPRI.

Clearly, there are alternative suppliers of social science and policy research and advice such as universities, Winrock International, the Harvard Institute for International Development, and until recently the Stanford Food Research Institute. IFPRI has a critical mass of policy researchers all devoted to the problems of developing countries and can assemble teams with complementary skills relatively quickly. IFPRI also has experience in primary and secondary data gathering and analysis and access to data bases that gives it some comparative advantage over many other alternative suppliers. Being in the CGIAR perhaps provides a primary differentiating factor, compared with these other internationally recognized entities. Countries like Viet Nam are quite familiar with other CGIAR centers like the International Rice Research Institute and the International Crops Research Institute for the Semi-Arid Tropics; when it learned that IFPRI is a part of the same system that serves so well in the biological sciences, its level of confidence rose. All of this potentially gave IFPRI the credibility and reputation to reduce the research and adoption lags associated with its research vis-à-vis alternative suppliers. In the mind of this author, this has certainly been evident in the Viet Nam rice policy work, and the economic value of the time saved hence is one legitimate measure of its impact.[6]

This type of impact can be measured empirically if the policy research has the requisite analysis and data to enable it to be done (Figure 3). This should be true in most cases, and it certainly is in the study with Viet Nam.[7] In the first quadrant, the conceptual relationship between the duration of the research project and the output of knowledge or information is shown to exhibit a typical phase of increasing and then decreasing returns.[8] Moving anti-clockwise, the knowledge and information is then shown as affecting the time it takes to effect a policy change in the second quadrant. Presumably this relationship can take many forms. Instead of the reverse L-shape depicted in Figure 3, it could conceivably be a step-like function, commencing with a vertical phase on the left and ending with a vertical phase on the right, after a horizontal phase in between.

The saving in time from knowledge and information is then transformed in quadrant 3 into improvements in economic welfare from the more timely policy changes. It is basically the benefits from discounting a stream of income gains that commence earlier. When these discounted welfare benefits are mapped in research time space, it results in the relationship depicted in the fourth quadrant. If the IFPRI research took OA time to complete, then the value of this research is measured by AB. However, if we assume that alternative suppliers eventually would have come up with policy relevant research and recommendations, but would do it with the production of less persuasive information and knowledge, then all of OA cannot be attributed to IFPRI. If we assume the research time X discounted benefits relationship of alternative suppliers in quadrant 4 is DC, then one measure of the net impact of IFPRI is given by CB.[9]

Traxler and Byerlee (1992) viewed crop management research as generating information that changes farmer practices involving the combination of inputs. The result is that the logistic curve typical in adoption studies is shifted to the left, increasing both the rate and the ceiling level of adoption, compared to what it would have been if alternative suppliers of the information were the only source. However, they did not attempt to empirically estimate the benefits of crop management research using this approach.

There is always the possibility that the policy changes made will be reversed at some future time when the political environment changes. In this event, the benefits can be short lived. One commentator has pointed out that although Viet Nam has announced a commitment to the World Trade Organization and Asian Free Trade Association agreements on tariff and protection dismantling, it has yet to wholeheartedly and irrevocably commit to them (Warner, Center for International Economics, personal communication). Impact evaluation must be sensitive to the possibility of such reversals. Indeed, in 1998, there is some suggestion that the government of Viet Nam is still unwilling to completely free up rice exports, as it placed a temporary embargo on further increases in 1998 exports in mid-year.

## ESTIMATING THE VALUE OF IFPRI COLLABORATION WITH VIET NAM

During the interview process it was evident that there were many influences on the decision to relax internal and external controls on trade in rice substantially in 1996–97. Stakeholders like the ADB and the World Bank were key ingredients, and the government of Viet Nam had already embarked on a general reform program under the *doi moi*. Indeed, rice export quotas had been increased during the early nineties but not to the same extent as occurred from 1996. Many voices were being heard by the government in 1996 when the decisions were made. IFPRI's was one of them.

It will be recalled that many of those interviewed stated clearly that the IFPRI research hastened the decisionmaking on these issues (Table 7). The estimates range from a time saving of at least six months to more than two years (Interviews 4 and 18, respectively). Unfortunately, only a few respondents were prepared to provide an empirical estimate of the time saved, so a distribution and central tendency could not be derived. In its place the range was used to set a conservative estimate of one year and a more optimistic one of two years. If we apply these time savings to the estimated increases in national income to Viet Nam from the policy changes that are derived from the VASEM, we arrive at a measure of the economic benefits from the IFPRI role. We will not assume that the economic surpluses generated by a relaxation of controls are all attributable to IFPRI, rather that they simply occurred earlier than they otherwise would have.[10]

We implicitly assume here that the VASEM simulations correctly portray the efficiency gains and distributional outcomes from policy changes.[11] In the Bayesian contexts suggested by Lindner (1987) and Gardner (1997), there is of course a cost of possible wrong decisions due to a chance that parameter values and settings in VASEM are not the true ones. In view of the extensive primary data gathering phase and peer review processes within IFPRI during the many outside seminars and workshops and in professional journal submissions, the probability of that is minimal.

In Table 8 empirical estimates of the value of the rice policy changes effected by the government of Viet Nam itself and the IFPRI contributions to rice policy formulation in Viet Nam are arrayed. They have been generated using the VASEM model under the various assumptions about the pace at which export quotas and internal trade flows were relaxed. In Row 2A, the benefits of the export quota changes that actually occurred are calculated as the difference in annual national income between cases 1B and 1A in Table 8. A conservative view of the impact of IFPRI on these changes is shown in Row 2B as the difference in national income streams between cases 1B and 1C. Similarly, a more optimistic view is in Row 2C, which is derived from the national income differences in Rows 1B and 1D. To each of these benefit streams is added the benefit from relaxation of internal trade restrictions, which are estimated to begin in 1997 in case 1B, 1998 in 1C, and 1999 in 1D.

The estimates of IFPRI's contribution to the income gains to Viet Nam generated from the policy changes peak in 1997. In the conservative scenario (2B) they cease in the year 1998, whereas they continue for one more year in the more optimistic scenario (2C). The peak value is $54 million in the latter case and $35 million in the former. The benefits to Viet Nam from the two policy changes of course continue for as long as the policies remain in place. These stabilize at $80 million annually from 1999. Credit should be given to the government of Viet Nam for making these policy decisions, which have clearly had major economic benefits to the country, without adversely affecting the incidence of poverty.

The present values and benefit-cost ratios of the benefit streams under the three scenarios are depicted in Table 9. If we truncate these at 1997 to reflect only those realized to date, the most conservative estimate of IFPRI's contribution to Viet Nam is a present value of $45 million, yielding a benefit-cost ratio of 56. If we use the more optimistic assessment of IFPRI's role and truncate at 1997, we obtain a present value of $61 million and a benefit-cost ratio of 77. Allowing the benefit streams to play out until 2000 does not increase the conservative present value. For the more optimistic scenario, the present value increases to $91 million and the benefit-cost ratio to 114 when calculated to 2000.[12] The present value of the two policy changes without attribution is estimated at $222 million up to 2000, rising to almost a billion dollars if policies remain in place until 2020.

Whereas the interviews in Viet Nam were convincing about the influence of the IFPRI research outcomes on decisions that had an effect beginning in 1996, the fact that the research project did not formally end until early 1997 might suggest that attributing effects in 1996 is heroic. Although the author believes the scenarios analyzed in Tables 8 and 9 fairly depict the contributions of IFPRI, another set of simulations were done assuming the policy changes were not affected by IFPRI until 1997. The present values and benefit-cost ratios fell between 18 and 23 percent when this adjustment was made.[13]

The benefits derived from using VASEM in Table 8 exclude those accruing to the rest of the world from the increased exports of rice from Viet Nam.[14] Viet Nam is a low-cost producer of rice and the rest of the world is a net importer from Viet Nam. It now represents some 20 percent of world rice trade, and the current VASEM uses an export demand elasticity of −12 for Viet Nam rice. In these circumstances there will always be a positive net welfare gain to the rest of the world from a relaxation of export quotas on Vietnamese rice. Hence the above welfare benefits to Viet Nam underestimate the total international benefits. Rice consumers in the rest of the world gain and producers lose. The rents of the SOE in Viet Nam are reduced and accrue to both consumers in the rest of the world and Viet Nam rice producers. Efficient rice producing and exporting countries like Thailand may lose from Viet Nam's entry into the world market.

Figure 4 depicts the national and international benefits of a relaxation of rice export controls in Viet Nam. The excess demand (ED) and excess supply (ES) curves in Figure 4b are drawn from the rest of the world market in Figure 4c and the Viet Nam market in Figure 4a, respectively. In 1995 the situation was that export quotas of ab in Viet Nam led to an excess supply curve $ES_o$, a world price of $P_0^w$, a domestic price of $P_0^d$ in Viet Nam, and imports by the rest of the world from Viet Nam of ef (=ab). With complete abolition of quota controls the world price equilibrates at $P_1^w$ (Figure 4b), at the intersection of the new excess supply curve $ES_1$ and ED.

The economic rent to the SOE at the original world price $P_0^w$ is (A). This disappears upon complete relaxation of controls. One part (*ghij*) is transferred to the rest of the world, and the other part (*jiba*) is transferred to Vietnamese rice producers. The net gain in economic surplus to Viet Nam from the removal of restrictions is (B) plus (C) minus *ghij* in Figure 4a. It is these areas that are calculated in Part 2 of Table 8 from the VASEM model.

Rice producers in the rest of the world lose (D) from Viet Nam's relaxation of export quotas, and consumers gain (D) plus (E). The net result is a gain of (E) in economic surplus to the rest of the world. Part of (E) is a transfer from Viet Nam SOE (*ghij*) and part is deadweight loss elimination.

Table 9 also shows the present values and benefit-cost ratios with benefits to the rest of the world included. Depending on the scenario, inclusion of the international benefits from the policy changes increases the present values and benefit-cost ratios by 34 to 84 percent.

Viet Nam's share of the total international benefits from the two policy changes is 62 percent. The balance of 38 percent spills over to the rest of the world. Between 55 and 61 percent of IFPRI's contribution to the international benefits accrues to Viet Nam. It is notable that this implies 39 to 45 percent of IFPRI's contribution to improved welfare is of an international character in this particular project. It is perhaps appropriate that this can be demonstrated for an Institute with an international mandate and a focus on public good research.

Some 60 percent of Viet Nam's exports of rice are to predominantly low-income countries of Asia and Africa (Goletti and Minot 1997, 7–27). These stand to gain directly from the decline in world prices occasioned by expanded exports from Viet Nam. However, the benefits of lower world prices from Viet Nam's expanded role in the export market also accrue to countries importing rice of similar quality to Viet Nam but from other countries. To the extent that these are also low-income countries, the international benefits from Viet Nam's rice policy changes may have tended to favor the poor also. In 1992–94 low-income countries represented some 50 percent of total world rice imports (personal communication, M. Rosegrant using IFPRI IMPACT model). Hence, even more affluent countries participated significantly in the welfare gains from Viet Nam's increased role in the world rice trade.

The VASEM simulations in Tables 8 and 9 can be combined with net benefit ratios from the household survey data used in the IFPRI research to assess the impact on poverty in Viet Nam. Table 10 shows the number of people who move above or below the poverty line set at the income level equivalent to the 25$^{th}$ percentile in 1995. This was Dong 710,000 per capita per year (US$66) in 1992–93 terms.

Overall the two policy changes are shown to have marginally increased the number of people falling below the poverty line. However, the increase represents less than 0.1 of the population. The conservative scenario on IFPRI's role suggests a small reduction in poverty, while the more optimistic scenario indicates a marginal worsening of poverty. The latter result is difficult to rationalize. Indeed these results differ from those obtained by Goletti and Minot with earlier versions of VASEM.

The primary conclusion from this poverty analysis is that, in the short term, the policy interventions by the government of Viet Nam and IFPRI's role in them may have

had a neutral effect on the numbers in absolute poverty in the short term, or at worst had a very small adverse effect. However, there may be long-term benefits to the poor through the contributions of these policies to economic growth and the now well-documented effect of this on poverty alleviation (Bruno, Ravallion, and Squire 1990; Deininger and Squire 1996; Roemer and Gugerty 1997; Dollar and Pritchett 1998).

## 6. LESSONS LEARNED

There are a number of issues that emerged during the course of this study that might be worth raising as IFPRI continues its impact assessment program:

1. One of the effective aspects of this study was the engagement of both professional peers and policy advisers and decisionmakers from Viet Nam during the planning and conduct of the research. This helped ensure that policy research capacities were strengthened, while allowing the directions of the research to be responsive to the needs of policymakers. This increased the probability of adoption of the recommendations by building a sense of ownership of the outcomes by the primary collaborating partner, MARD.

2. Communication strategies are critically important. Both their timing and extent are influential. The Steering Committee of partners facilitated interaction and set the stage for subsequent consensus-building beyond the immediate collaborating partner. IFPRI's extensive use of seminars and workshops involving a wide array of partners and stakeholders as soon as the research outcomes were available helped build an essential consensus around key decisionmaking events. In a diffuse policymaking environment and where there are structural changes occurring, as was the case in Viet Nam, consensus building is a key strategic objective. As others have noted, IFPRI cannot rely solely on professional publication to have impacts. These are necessary, but not sufficient.

3. The timing of the research and its timeliness are the most influential determinants of the adoption of the recommendations that flow from it. To have results emerging within one year in such a dynamic policymaking environment as Viet Nam helped to make the study relevant to contemporary issues. A downside to this is the risk of making empirical mistakes in the analysis, which could materially affect the policy advice. While this was not evident in this case, refinements to the model after peer review did alter empirical estimates significantly, but not in a way that compromised the initial advice. There needs to be a balance between timeliness and quality, lest the costs of wrong policy decisions outweigh the economic value of timely advice.

4. The training of technicians and policy advisers in the science and art of surveys, market economics, and economic modeling is especially valuable in transitional or emerging economies like Viet Nam. There is an eagerness to learn and build upon the specific research conducted within the context of the project. Of course, there is no substitute for formal academic training at tertiary institutions in developed market economies and IFPRI obviously should not do this. However, where there are young professionals returning from graduate programs in the United States,

Australia, and elsewhere, as is the case in Viet Nam, opportunities are growing for even more productive collaboration in future.

5. There are advantages and disadvantages in having a ministry of a government as the primary collaborating partner, rather than a research institution. One advantage is that there is a greater likelihood of influencing policy responses in the short term, and this obviously has high economic value. A possible disadvantage is that staff of ministries can have a higher turnover than research institutions and they are often called upon at short notice to address emergent issues. This can affect the ability of Ministry staff to maintain and update data bases and refine models to keep them policy-relevant. A tripartite collaboration may be a preferred arrangement in the future to try and minimize these trade-offs.

6. Successful projects like this one with Viet Nam can lead to a derived demand for continuing input from IFPRI in a country. Indeed, this is another measure of the impact of IFPRI's work. However, a project mode with its limited time horizons may not be the preferred vehicle to respond to such demands. Core long-term support, which allows sustained impact in terms of institutionalization and capacity building, would seem desirable. In Viet Nam the view was that it was the in-depth study of the rice sector that differentiated IFPRI's product from others, and further collaboration should be of a similar type. The payoff to continuing, longer-term involvement by IFPRI in newly emerging economies like Viet Nam is conceivably much higher in terms of the value of new information to inform the policy process, than in countries with a much longer tradition of policy research.

7. The funding support of stakeholders like the ADB and the World Bank can be an effective lever to effect policy change in a country. While some would discourage such associations, a case can be made in favor of it. The important point is that the conduct of IFPRI's research and the conclusions and recommendations that emerge are seen by the country, and importantly by IFPRI's peers, as not being compromised by the source of funding. This requires the IFPRI research team to focus on building a clear sense of ownership of the research by the partners in the country and subjecting the research to extensive review by a wide range of peers, partners and stakeholders alike.

## 7. CONCLUSION

The changes to rice policies effected by the government of Viet Nam from 1996 to 1998 had a large and measurable effect on national income in Viet Nam. To this extent, they were a wise and timely set of decisions to which many stakeholders, both national and international, can take some credit. The present values of the changes are already worth some $61 million to Viet Nam and could rise to $966 million if they are sustained to 2020. The decisions also generated positive benefits to the rest of the world, which from 1989 had become a net importer of rice from Viet Nam. The country now represents some 20 percent of the world rice trade. Around 40 percent of the total gains accrue to the rest of the world and could be worth $560 million by 2020.

The research conducted by IFPRI with Viet Nam during 1995–97 clearly helped illuminate the policy environment with new information, and not only informed but influenced the timing of the changes to rice policies that ensued. The conservative estimates of the benefit-cost ratios on the investment made in the IFPRI research are 56 when only the benefits to Viet Nam are included and 91 when the returns to the rest of the world are included as well. These rise to 114 and 187, respectively, under a more optimistic scenario. These benefits are in addition to those that should properly be credited to other stakeholders who were and are working on economic policy issues in Viet Nam, which provided a climate for further change. These include the Harvard Institute for International Development, the National Centre for Development Studies in Canberra, and the Centre for International Economics in Canberra, among others.

The policy changes, and IFPRI's contribution to them, not only represented a large increase in the efficiency of use of resources, but probably were neutral in their short-term effects on the numbers in absolute poverty, both in Viet Nam and the rest of the world.

These estimates of the value of the IFPRI contribution do not include the benefits of training, capacity building, or the influence of the research itself on the type, quality, and extent of the policy decisions. In other words, it is assumed the decisions would have occurred anyway, but much later. Nor do they include what dynamic efficiency gains may have been set in train as a result of the static efficiency gains estimated here. Freebairn (1997) suggests the former are usually much larger than the latter. To these extents it is contended that the total benefits from IFPRI's involvement are probably larger than measured here.

The estimation of the benefits from the policy changes in Viet Nam, and of IFPRI's contribution to them, rely on the same basic model that was used to provide the advice to Viet Nam in the first place. As Krugman (1997) and Timmer (1998) point out, there is hence a circularity about this type of impact assessment. To avoid this ideally requires an independent assessment with new post-decision primary data and presumably a new model. The ideal will continue to be elusive and in its place the above estimates

will have to suffice. It should be noted, however, that the model used in this ex post assessment in fact had a number of refinements that improve the precision of the estimates of economic surplus from the model used in the original study. The new estimates are much lower than those estimated earlier but would not change the nature of the policy advice that was given.

If one of the major benefits of policy research of the type evaluated here is to hasten the change of policies in welfare-enhancing directions and these impacts erode over time, does this imply that the optimal strategy for IFPRI is to purposely identify short-run applied country policy projects rather than longer-run more basic studies that primarily add to the body of knowledge? This is not the appropriate inference. Rather the experience in Viet Nam suggests that there may be high value to the cultivation of long-run relationships with policymakers and professional peers in partner countries. In this process there may be scope for a sequential portfolio of policy-relevant research to be undertaken, such that at any point in time there will be a continuous benefit stream generated from the "preponement" of many and varied policy decisions. At the same time, as this study shows, professional papers can emerge that not only add to the body of knowledge, but improve the quality of applied policy research and better inform future decisions.

The large benefits generated from IFPRI's research with Viet Nam were no doubt partially due to a receptive policy environment. There was a momentum of change toward a more liberalized economy. To the extent that it is feasible, the experience of IFPRI in Viet Nam might suggest that, if potential impact is to be a major criterion in setting country priorities, explicit attention ought to be given to the revealed directions and speed of recent policy changes in candidate countries.

## Appendix 1

## PERSONS INTERVIEWED

### VIETNAMESE INSTITUTIONS

Government Price Committee (GPC)
- Professor Dr. Ngo Tri Long, Vice Director
- Mr. Nguyen Ngoc Bao, Head, International Cooperation Department

Hanoi Agricultural University (HAU)
- Mr. Nguyen Trong Dac, Deputy Head, Rural Development Department

Institute of Agricultural Economics (IAE)
- Dr. Nguyen Tien Manh, Director
- Mr. Nguyen Ngoc Que, Head, Department of Agricultural Enterprises
- Mr. Nguyen Cong Chuc, Senior Researcher

Ministry of Agriculture and Rural Development (MARD)
- Mr. Ngo The Dan, Vice Minister
- Mr. Cao Duc Phat, Director, Department of Agricultural and Rural Development Policy
- Mr. Dang Kim Son, Deputy Director, Department of Agricultural and Rural Development Policy
- Dr. Huynh Xuan Hoang, Director, Planning and Projection Department
- Mr. Nguyen Manh Trung, Senior Officer, Department of Planning and Projection
- Professor Dr. Nguyen Ngoc Kinh, Director, Department of Science, Technology and Product Quality
- Nguyen Viet Hai, Vice Director, Department of Science, Technology, and Product Quality
- Dr. Le The Thin, Senior Economist, National Food Security Committee
- Associate Professor Dr. Nguyen Kim Vu, Director, Post-Harvest Institute
- Dr. Nguyen Van Bo, Director, National Soil and Fertilizer Research Institute

Ministry of Planning and Investment (MPI)
- Mr. Ho Quang Minh, Deputy Director General, Foreign Economic Relations Department
- Mr. Ray Mallon, Consultant, Central Institute of Economic Management (CIEM)

National Economics University (NEU)
Mr. Vu Kim Dung, Head, Microeconomics Department
Mr. Vu Huy Thong, Vice Head of Department, Faculty of Marketing

National Institute of Agricultural Planning and Projection (NIAPP)
Associate Professor Dr. Vu Nang Dzung, Director

Sub-National Institute of Agricultural Planning and Projection (Sub-NIAPP)
Dr. Nguyen The Binh, Vice Director
Dr. Nguyen Van Nhan, Deputy Director

Viet Nam Agricultural Science Institute (VASI)
Professor Dao The Tuan, former Director

**OTHER INSTITUTIONS**

Dow Jones, Hanoi
Ms. Anya Schiffrin, Bureau Chief

Food and Agriculture Organization, Hanoi (FAO)
Dr. Marcel J. G. Messier, Representative in Viet Nam
Mr. Vu Ngoc Tien, Programme Assistant

United Nations Development Program, Hanoi (UNDP)
Mr. Nguyen Thanh Tung, Programme Officer

World Bank (WB)
Dr. Alexander F. McCalla, Director, Rural Development
Dr. Geoffrey B. Fox, Manager, Rural Development and Natural Resources Sector Unit, East Asia and Pacific Region
Dr. Choeng Hoy Chung, Senior Economist, Rural Development and Natural Resources Sector Unit
Dr. Christopher Gibbs, Principal Rural Development Specialist

National Centre for Development Studies, Australian National University (NCDS)
Professor Ronald C. Duncan, Director

Private Consultants
Mr. Tom Slayton, Rice Analyst
Dr. Robert Warner, Centre for International Economics (CIE)

## Appendix 2

## IMPACT OF IFPRI IN VIET NAM RICE POLICY FORMULATION

### QUESTIONS TO PARTNERS/STAKEHOLDERS

A. Capacity Building/Impact Sustainability

1. Assessment of value of training programs.

2. What are trainees now doing? Are they using the skills obtained?

3. How valuable was the study tour to Thailand?

4. Are the data bases still being used? What for? Are they being maintained/updated?

5. Is the government now providing more price and marketing information to the agents? Is this on radio and TV? (Survey found that personal contacts were the main source of this in the past)

6. Have collaborators used VASEM for other purposes?

B. Background and Policy Environment

1. Policy on export relaxation began in 1989 and also that on encouragement to commercial and private internal trade. How did IFPRI's policy options influence policy formulation from 1995 onward?

2. What was the motivation for the early change to liberalize exports? Foreign exchange? Declining farmer prices for rice? Alleviation of poverty? (Note: real prices to farmers declined 1990–95 in spite of the commencement of export quotas in 1989)

3. Was there in fact an effective export quota in the late 80s and 90s when exports were allowed—but only up to a maximum?

4. Who do the minister and/or vice minister usually rely on in coming to decisions?

C. Influence or Demand for the Research Agenda

1. What was the motivation for choosing or agreeing to IFPRI? What was the influence of external stakeholders like ADB, World Bank, etc.?

2. Did the government of Viet Nam have a role in setting the research agenda? Was this largely via the Steering Committee or in other ways?

3. What other research beside IFPRI's was drawn on in making policy choices?

4. Was the IFPRI research: (i) relevant, (ii) timely, (iii) of high quality, (iv) readable/accessible, (v) and did it have clear policy options, and (vi) other attributes?

5. What factors led to the continuing derived demand for IFPRI's collaboration (for example, the diversification and starch studies)?

6. Are there other studies you would like IFPRI to be involved in?

7. In the rice study, were there aspects missing that you would have liked to have seen addressed?

D. Communicating Results

1. What reports have been read from the IFPRI study? Has the Final Report in December 1996 been read? The Vietnamese translation was available in March 1997. Did you read the English or Vietnamese versions?

2. What did the Committee that was assembled to evaluate the report have to say about it?

3. What were the most influential/useful/informative communication vehicles used by the project: (i) seminars, (ii) papers, (iii) audio-visuals, (iv) workshops, (v) publications (refereed), (vi) individual interactions, and (vii) other?

E. Policymaking Impact

1. Has anything been done regarding credit constraints for millers and traders as identified in the IFPRI study?

2. How did IFPRI influence the timing of the rice policy changes? Did the IFPRI work speed up the increase in export quotas?

3. Did MARD use the CH-9 conclusions about the effects of the real exchange rate and monetary policy/domestic inflation on rice competitiveness in the Cabinet to change policies?

4. Did the IFPRI analysis in CH-11 of the adequacy of rice production to ensure food security (1,410 kilo-calories per caput) influence MOT/MARD to increase exports?

5. Did CH-11 analysis, which showed who would gain and lose from price changes consequent upon export and other policy changes, have an influence on policy changes chosen?

6. Was the government comfortable with using nonrice targeted programs for the poor who were vulnerable to adverse effects from rice price increases resulting from relaxations to the rice export policies (for example, food for work, fair price shops)?

7. Does the government plan to fully liberalize rice exports? If so when?

8. What were the main issues discussed by the vice minister during his visit to IFPRI in Washington, D.C. in October 1997?

9. Has the government explored or discussed the issue of use of an export tax instead of export quotas? If so, did the IFPRI study assist in the process? If not, why not?

10. Has the government considered auctioning export permits to generate revenue?

11. Have the options of investing in better transport and/or eliminating internal trade restrictions been considered? Did IFPRI's study influence these decisions? Has there been a decision to favor one or the other?

12. Was IFPRI's work on what export policies would give greater domestic price stability influential (for example, fixed export quota, export tax, variable levy)?

13. Were policymakers convinced that quota liberalization would favor the poor on balance, despite only a third of the households in Viet Nam being net sellers of rice and hence standing to benefit from price increases resulting from relaxation of rice export quotas? (IFPRI's study found that, in spite of this, the overall incidence and depth of poverty would fall)

14. Have any new institutions been created to give effect to the new policies (such as price monitoring)?

15. Did the existence of the IFPRI study and staff facilitate the interactions MARD had with MOT and MOF on the issue of macroeconomic policies like credit, exchange rates, and monetary policy and the rice sector?

16. What was the background to the invitation to IFPRI to be involved in the diversification and starch studies?

F. New Information and Insights

1. How much did partners learn about the structure and performance of the rice system from the IFPRI study? What findings or information were a surprise to them (for example, the extent of private trader buying of paddy [96.5 percent] versus the SOE's [2 percent)]?

2. Were partners aware that SOE's costs of marketing were about five times that of the private sector? Did this influence subsequent policy deliberations?

3. Was the analysis in CH-9 on the influence of the real exchange rate and current account balances on the competitiveness of rice helpful to MARD in dialogues with other ministries on rice policy changes?

4. Were partners aware that post-harvest losses were 13–16 percent? Has this knowledge led to decisions to upgrade drying, storage, milling, and grading technology? (IFPRI recommends encouraging the private sector in these areas.)

## G. Overview

There are some 13 recommendations from the original IFPRI study. What was the reaction of the government to them?

(1) Progressively increase rice export quotas until they are not binding.

(2) Substitute current quotas with export taxes.

(3) Give private sector access to rice exporting.

(4) Dismantle internal policy restrictions on rice movements freely allow internal trade.

(5) Promote rice exports with measures to improve rice quality, reduce shipping costs, and improve Viet Nam's reputation among foreign buyers.

(6) Provide access to credit to marketing agents to facilitate procurement operations, storage activities, and investments in processing and transport.

(7) Provide access to information on prices, food production, international markets, and the marketing system to a variety of marketing agents, both public and private.

(8) Encourage a stable and credible policy environment.

(9) Monitor macroeconomic policies to ensure exchange rate depreciation does not penalize farmers.

(10) Target food security stocks and distribution to food insecure households.

(11) Target investment in agricultural research to increasing yields.

(12) Also target research to improving rice quality.

(13) Invest in post-harvest technology.

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## NOTES

1. The Net Benefit Ratio measures the value of net rice sales as a percentage of income and indicates the short-term effect of a change in rice prices on income.

2. This assumption was later relaxed and the results had no material effect on the general conclusions arising from the study (see Minot and Goletti 1998).

3. The order in Appendix 1 bears no relation to the interview numbers cited in the text. These have been randomly assigned to preserve confidentiality.

4. Item 17 of Table 7 shows that institutionalization was regarded as the weakest feature of the project from respondents. This is of concern from the point of view of the sustainability of the work.

5. Gardner (1997, 21) points out that estimates of deadweight losses from U.S. farm programs by economists were not as influential as advocacy by them to newspaper editorialists, government experts, and commodity grant representatives, to the effect that commodity programs were costing billions to taxpayers, but accomplishing much less for farmers.

6. In the submission to the ADB (IFPRI and DAI 1995) it was stated that IFPRI is a nonprofit organization and hence it aims to have impact beyond the life of a given contract. It can supplement contract work from core in order to ensure impact. It also leaves "...trails of knowledge in a form accessible to policymakers in subsequent policy changes" (p.2). It further stated that it had multiple expertise that can backstop a particular project at low cost. It can also draw on many other country studies and experiences. This seems to make a strong case that IFPRI is in the game of generating both spatial and temporal spillovers; that it is somewhat unique and clearly producing public goods as a result.

7. Smith (1998) alludes to the challenges in measuring welfare impacts of social science research using models and cautions about the difficulties of attribution and the possibility of other rationales for the policy changes. Chapter 4 addresses the latter and in the following pages the former is addressed using the VASEM model.

8. It might be argued that Viet Nam is further away from a state of perfect information in the Lindner (1987) sense than perhaps a country like Bangladesh, where a lot of previous research on agricultural policy has been conducted by the many national policy research institutions and by IFPRI. Hence, Viet Nam's research time x knowledge/information production function in quadrant A presumably is in a phase

of increasing returns, whereas in Bangladesh it may well be at the decreasing returns phase. Such assessments could assist in setting country research priorities in future.

9. Of course, the curves in all other quadrants for alternative suppliers in Figure 3 would be closer to the origin also, but are not drawn here so as to keep the graphic simple. In this formulation, the inherent assumption is that alternative suppliers would generate the same quality of information and advice, given sufficient time. It may well be this is not the case and IFPRI will always generate higher quality outputs *and* in less time.

10. See footnote 9.

11. The VASEM has been modified since the initial simulations reported in IFPRI (1996). The version used here is basically that in Minot and Goletti (1998). It does not include a multiplier effect from income changes, it uses a domestic rice demand elasticity of −0.3 instead of −1.0, and it has the export demand elasticity for Vietnamese rice at −12.0 instead of infinity. The benefits of policy changes using the earlier specification were more than double those reported here.

12. From 1975 to 1995 donors had contributed a total of $108 million to IFPRI. Hence this single project, representing less than 1 percent of the total cost of IFPRI, has generated benefits of between 42 and 84 percent of the total costs of all of IFPRI's programs since it began operation.

13. The 1995–1997 truncation yields the same estimates for all scenarios so only the 1995–2000 series is used for the comparison.

14. I am grateful to Shenggen Fan for raising this issue and to Nick Minot for helpful discussions and assistance in estimating these international benefits.

Table 1—Seminars and workshops

| | Methodology workshops | Policy workshops | Seminars in Viet Nam | Seminars elsewhere | Total |
|---|---|---|---|---|---|
| Number of events | 2 | 1 | 10 | 6 | 19 |
| Number of participants | 44 | 100 | 331 | 185 | 660 |

Table 2—Proportions of households growing and selling rice in Viet Nam

| | Growing | Selling |
|---|---|---|
| | (percent) | |
| Viet Nam | 69.9 | 35.3 |
| Rural | | |
| Poorest 20 percent | 91.2 | 45.7 |
| Richest 20 percent | 69.5 | 39.1 |
| Urban | | |
| Poorest 20 percent | 31.6 | 13.3 |
| Richest 20 percent | 5.2 | 3.0 |

Source: IFPRI 1996, 382.

Table 3—The household rice economies of Viet Nam

| | Income per Capita | Proportion of Households | Sales as Percentage of Income | Purchases as Percentage of Income | Net Benefit Ratio [b] | Household Rice Consumption |
|---|---|---|---|---|---|---|
| | (1,000 vnd/year) | (percent) | | | (percent) | (kilograms) |
| Viet Nam | 1,280 | 100 | 13 | 11 | 2 | 768 |
| Rural [a] | 1,079 | 80 | 16 | 10 | 6 | 806 |
| Red River Delta | 964 | 20 | 18 | 6 | 12 | 750 |
| North Central Coast | 840 | 12 | 11 | 11 | 0 | 724 |
| Mekong River Delta | 1,294 | 17 | 30 | 12 | 19 | 918 |
| Urban | 2,108 | 20 | 1 | 15 | -14 | 617 |
| North Central Coast | 1,102 | 1 | 3 | 17 | -14 | 659 |
| Rural | | | | | | |
| Poorest 20 percent | 479 | 19 | 16 | 11 | 5 | 780 |
| Richest 20 percent | 2,370 | 11 | 15 | 6 | 9 | 705 |
| Urban | | | | | | |
| Poorest 20 percent | 566 | 1 | 4 | 33 | -29 | 727 |
| Richest 20 percent | 3,233 | 9 | 1 | 9 | -8 | 526 |

Source: IFPRI 1996, 384-395.
[a] The North Central Coast is the poorest region and the two deltas are the most affluent.
[b] This measures the short-term effect of a 100 percent change in rice prices on the percentage change in household income.

Table 4—Distributional effects of removal of rice quota

| | Proportion of population | Change in income |
|---|---|---|
| | (percent) | |
| Viet Nam | 100 | 4.9 (3.0) |
| Urban | | |
| Poor | 3 | –0.4 (–2.9) |
| Nonpoor | 17 | 1.6 (–1.7) |
| Rural | | |
| Poor | 37 | 5.5 (3.9) |
| Nonpoor | 43 | 6.1 (4.2) |

Source: IFPRI 1996, 395, 425-426.
Note: Numbers in parentheses are derived from later simulations where the small country exporter assumption was relaxed (see Minot and Goletti 1998).

Table 5—Rice production, trade, and market trends in Viet Nam

| | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|---|
| Paddy production (metric tons)[a] | 19.0 | 19.2 | 19.6 | 21.6 | 22.8 | 23.5 | 25.0 | 26.3 | 27.6 | 28.3 |
| Actual export quota (metric tons)[a] | | | | 1.9 | 1.6 | 1.9 | 2.0 | 2.9 | 3.6 | 4.0 |
| Rice exports (metric tons)[a] | 1.4 | 1.5 | 1.0 | 2.0 | 1.7 | 2.0 | 2.0 | 3.0 | 3.6 | 4.0[d] |
| Domestic wholesale rice (Mekong River Delta) prices (US$/ton nominal)[b] | 143 | 135 | 162 | 155 | 159 | 163 | 200 | 207 | 201 | 195 |
| Domestic real paddy prices | | | | | | | | | | |
| (dong/kilogram)[b] | 480 | 600 | 490 | 370 | 330 | 320 | 370 | 400 | … | … |
| (US$/ton) | 107 | 87 | 53 | 33 | 29 | 29 | 34 | 36 | … | … |
| Viet Nam rice export price (US$/ton)[c] | 194 | 170 | 226 | 207 | 203 | 218 | 266 | 285 | 247 | 260 |

Sources:
[a] IFPRI, 1996, p. 238, and personal communication with Francesco Goletti.
[b] Goletti and Minot, 1997, pp. 5-33.
[c] Viet Nam prices rose from 65 percent of Bangkok <5 percent brokens in 1989 to 79 percent in 1996.
[d] Exports to May 1998 were 2.5 million tons, which is in excess of what was planned to meet the quota. Exports for all of 1998 are expected to be no more than 3.8 million tons. Originally the quota was set at 4.0 million tons, but in mid-1998 the government revised this down to 3.6 million tons due to concerns about drought and food security.

Table 6—Chronology of rice policy decisions by the government of Viet Nam (GOV) and IFPRI involvement

| Year | IFPRI activities | Government decisions |
|---|---|---|
| 1992 | Initial contact with VASI director in France. Suggestion for IFPRI to undertake research collaboration. Planning for IFPRI senior staff visit to Viet Nam. | Rice exports at 1.9 million tons. |
| 1993 | Director of Markets and Structural Studies Division visits Viet Nam. Establishes formal linkages with government. Recommends visit of director general. | Land Reform Resolution No. 5 (five rights) promulgated.<br><br>Rice exports at 1.6 million tons. |
| 1994 | Director general leads IFPRI delegation to Viet Nam. Introduces IFPRI's program to ministries and research organizations. Explores scope for collaboration. | Government response to IFPRI visit passive.<br><br>Rice exports at 1.9 million tons. |
| 1995 | IFPRI commences study on property rights to land with VASI as part of multicountry study. IFPRI/DAI submit proposal on Rice Market Monitoring and Policy Options Study to ADB in May after invitation to make submission, a competitive process. Funding approved in July and project commences September. Surveys begin December. | Rice exports at 2.0 million tons.<br><br>High world prices of rice. Rice trade very active. Government imposes controls on domestic trade from concern about food security in north. Illegal rice flows to China. |

(continued)

Table 6—Continued

| Year | IFPRI activities | Government decisions |
|---|---|---|
| 1996 | Surveys continue to June; training courses conducted January-March; study tour to Thailand undertaken in June. Analytical work undertaken July-September. Final workshop in October to present results. Many seminars around country before and after. | Intense discussions in many government fora stimulated by the IFPRI studies led to reevaluation of rice policies.<br><br>Crisis in May-June after main April harvest led to significant price falls. Farmers complain to provincial leaders in south. Minister of Agriculture and Rural Development visits south to review situation and promises farmers price support. Intense discussions in December involving MARD, Government Office, SOE, MOT, MPI, MOF, Government Price Committee, provincial leaders over rice price policy and exports. MARD main protagonist for liberalization using IFPRI study as a key input.<br><br>Exports reach 2.9 million tons without a crisis. |
| 1997 | Training program on VASEM model January and March. Conclusions of rice policy study presented at World Bank/FAO Seminar on Rural Development in Hanoi. Model refinements in response to feedback do not alter conclusions.<br><br>IFPRI joins Lincoln International in June to bid on United Nations Development Programme (UNDP) rural development strategy contract. IFPRI responsible for agricultural diversification and poverty mapping. Project commences August.<br><br>MARD delegation led by Vice Minister visits IFPRI in Washington, D.C. | Decrees by Prime Minister in March raise rice export quota to 3.5 million tons, allow competition between SOE and provincial food companies, and liberalize domestic trade.<br><br>Rice exports 3.5 million tons.<br><br>Market monitoring unit set up in MARD in November. |

(continued)

Table 6—Continued

| Year | IFPRI activities | Government decisions |
|---|---|---|
| 1998 | New study on starch industry development with PTRI and Centro Internacional de Agricultura Tropical funded by the International Development Research Centre.<br><br>UNDP project on diversification and poverty mapping completed and seminar held in March<br><br>Decision to have IFPRI Board of Trustees meeting in Hanoi in February 1999 and to hold symposium on Food Policy in Indochina jointly with MARD.<br><br>Food processing study conducted in April for the United Nations Industrial Development Organisation involving rice, coffee, seafood, fruits, and vegetables.<br><br>Trade incentives and constraints study conducted for World Bank in May.<br><br>Impact study conducted July-September. | New decree by Prime Minister raising rice export quota to 4.0 million tons and providing for private-sector participation.<br><br>In March, four private companies apply for export licenses. No licenses yet issued.<br><br>Government curbs further exports in June after they exceed expected rate in May at 2.5 million tons. Domestic prices very high.<br><br>Rice exports still expected to reach 3.8 million tons. |

Table 7—Summary of partner and stakeholder interview responses

| | | Number of responses | |
|---|---|---|---|
| | Question or issue related to IFPRI study | Positive | Negative |
| 1. | Did aspects of study surprise or give original insights? | 17 | 2 |
| 2. | Policies on rice export quotas and increased private-sector role influenced | 16 | 1 |
| 3. | Policies on rice export quotas and relaxation of internal trade controls occurred earlier than otherwise | 14 | 0 |
| 4. | Training was effective | 10 | 0 |
| 5. | Overall assessment of study excellent | 9 | 1 |
| 6. | Data and recommendations used by government of Viet Nam | 8 | 0 |
| 7. | Conclusions on links between rice export quotas and poverty/food security influential | 8 | 1 |
| 8. | Expressed demand for further IFPRI policy research | 5 | 0 |
| 9. | Policy on rice export tax influenced | 5 | 1 |
| 10. | Policy research capacity sustainably strengthened | 5 | 2 |
| 11. | Policies on targeted programs for poor influenced | 4 | 0 |
| 12. | Conclusions on importance of exchange rate and monetary policies on rice competitiveness influential | 4 | 1 |
| 13. | Policy on credit availability influenced | 4 | 2 |
| 14. | Data and recommendations used by stakeholders | 2 | 0 |
| 15. | Is VASEM model still being used? | 2 | 4 |

Table 7—Continued

| | Question or issue related to IFPRI study | Number of responses: Positive | Number of responses: Negative |
|---|---|---|---|
| 16. | Press coverage good | 1 | 0 |
| 17. | Institutionalization good | 1 | 4 |
| 18. | Conclusions on effects of rice export quotas on domestic price stability influential | 0 | 1 |

Table 8—Value to Viet Nam of IFPRI research on rice policies

| | Years | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| 1. Export quotas (million tons) | | | | | | | |
| A. Without policy change | 2.5[a] | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| B. At actual levels with IFPRI | 2.5 | 3.0 | 3.6 | 3.8 | 4.0 | 4.0 | 4.0 |
| C. At delayed levels conservative about IFPRI comparative advantage over alternative supplies | 2.5 | 2.5 | 3.0 | 3.6 | 3.8 | 4.0 | 4.0 |
| D. At delayed levels more optimistic about IFPRI comparative advantage over alternative suppliers | 2.5 | 2.5 | 2.5 | 3.0 | 3.6 | 3.8 | 4.0 |
| 2. Benefits and costs (US$ millions)[b] | | | | | | | |
| A. Benefits of policy changes[c] | 0 | 16 | 54 | 60 | 66 | 80 | 80 |
| B. Conservative value of IFPRI role[d] | 0 | 16 | 35 | 0[e] | 0 | 0 | 0 |
| C. More optimistic value of IFPRI role[f] | 0 | 16 | 54 | 36 | 0 | 0 | 0 |
| D. Cost of IFPRI research | 0.183 | 0.552 | 0.138 | 0.000 | 0.000 | 0.000 | 0.000 |

Note:

[a] The *de jure* quota was set at 2.0 million tons; however, informal exports to China were estimated at 0.5 million tons in 1995. Hence, the base case was set at 2.5 million tons and amounts to an even more conservative estimate of the benefits.

[b] The benefits include those from relaxing both export quotas *and* internal trade controls on rice. The latter occurred in 1997 in case 1A. It is lagged one and two years in 1C and 1D, respectively. Only benefits accruing to Viet Nam are shown; those to the rest of the world are excluded here.

[c] Measured as the difference between national income estimates generated from VASEM under 1B minus 1A.

[d] Measured as the difference between national income estimates generated from VASEM under 1B minus 1C.

[e] As actual exports under scenario 1B approach 4.0 million tons, the differences in national income estimates between scenarios 1B, on the one hand, and 1C and 1D, on the other, disappear. This is because under the large country assumption, as Viet Nam approaches the free-market level of exports, the gains from liberalization are offset by the losses due to lower world prices. The benefits of export liberalization are underestimated (overestimated) to the extent that the assumed elasticity of export demand (−12) is too small (large) in absolute value.

[f] Measured as the difference between national income estimates generated from VASEM under 1B minus 1D.

Table 9—Benefits and costs of the IFPRI research on rice policies to Viet Nam and the rest of the world

| | 1995–1997 | | 1995–2000 | |
|---|---|---|---|---|
| | Viet Nam only | Viet Nam, plus ROW | Viet Nam only | Viet Nam, plus ROW |
| Present values (US$ millions)[a] | | | | |
| Of policy changes | 61 | 98 | 222 (966)[b] | 355 (1526)[b] |
| Conservative value of IFPRI role | 45 | 72 | 45 | 82 |
| More optimistic value of IFPRI role | 61 | 82 | 91 | 149 |
| Benefit-cost ratios | | | | |
| Conservative value of IFPRI role | 56 | 91 | 56 | 103 |
| More optimistic value of IFPRI role | 77 | 103 | 114 | 187 |

Note:
[a] In 1995, using a 5 percent discount rate.
[b] Figures in parentheses represent the present values with the benefit streams from policy changes continued up to 2020.
ROW = rest of the world.

Table 10—Effect of policy changes on numbers moving above or below poverty line in Viet Nam[a]

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|
| | | | (thousands) | | | |
| Overall effect of policy changes | 0 | +46 | +77 | +63 | +81 | +66 |
| Conservative estimate of IFPRI role | 0 | +46 | -77 | -24 | -16 | 0 |
| More optimistic estimate of IFPRI role | 0 | +46 | +77 | +134 | 0 | +107 |

Notes: [a] A positive figure implies an increase in the number of people who fell below the fixed poverty line at the 25th percentile set in 1995. A negative figure implies a reduction in the number of people falling below the poverty line.

**Figure 1 Decision processes in rice policy changes in Vietnam**

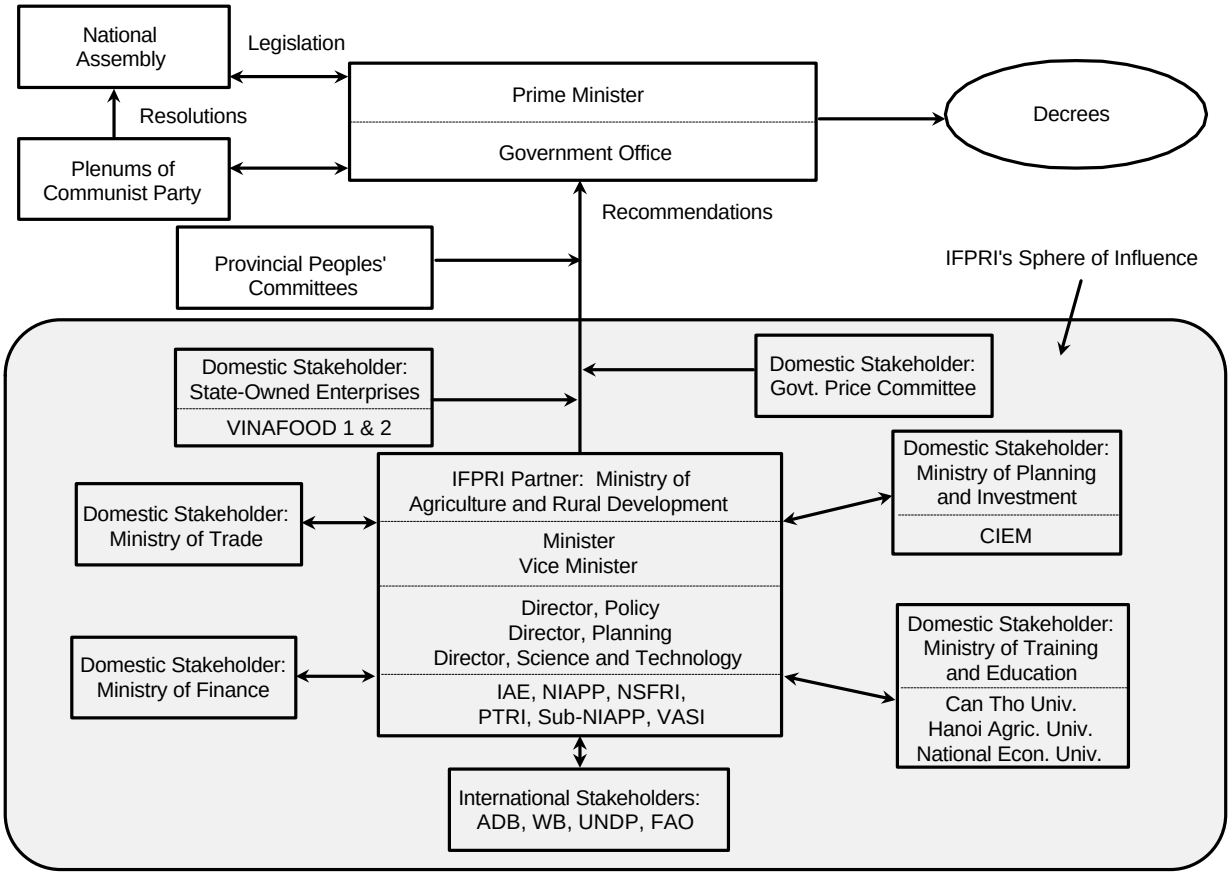


**Figure 2 The place of IFPRI in the social science and policy environments**

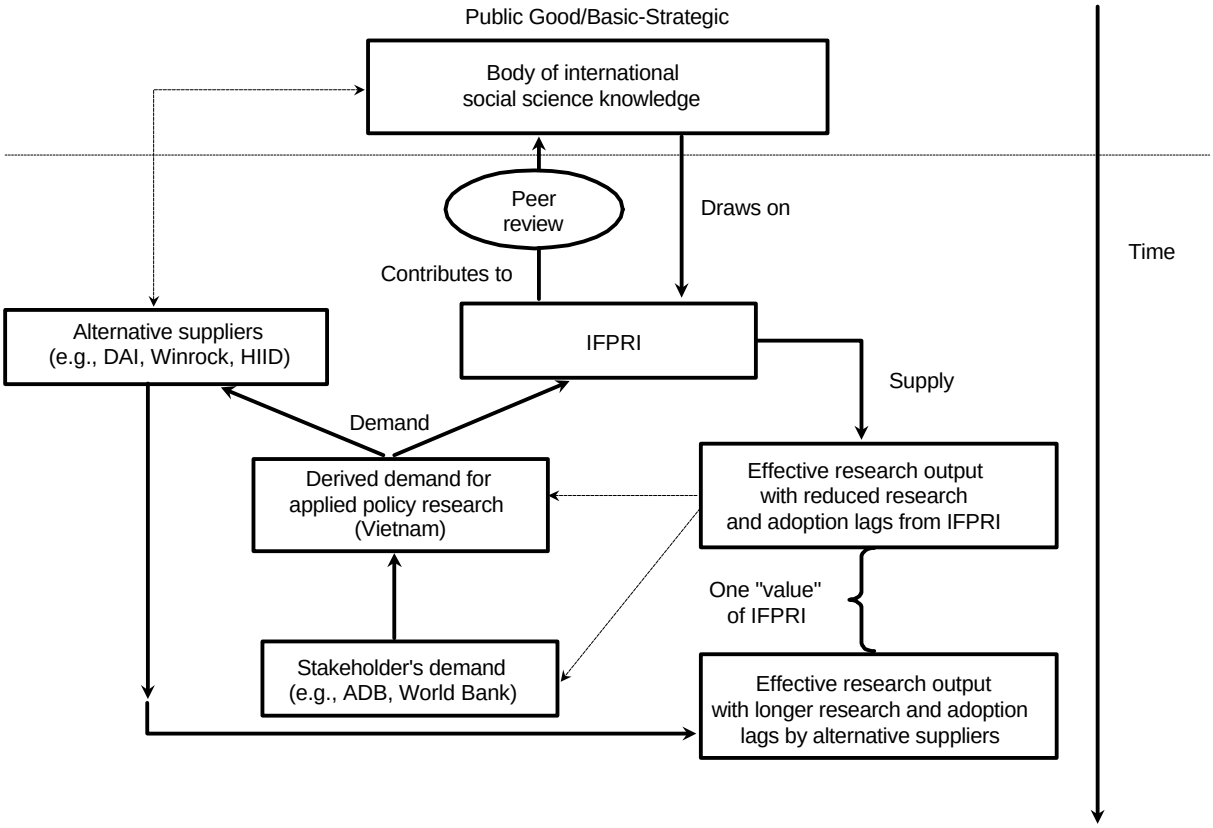


**Figure 3 Measuring the impact of IFPRI research on rice policies in Vietnam**

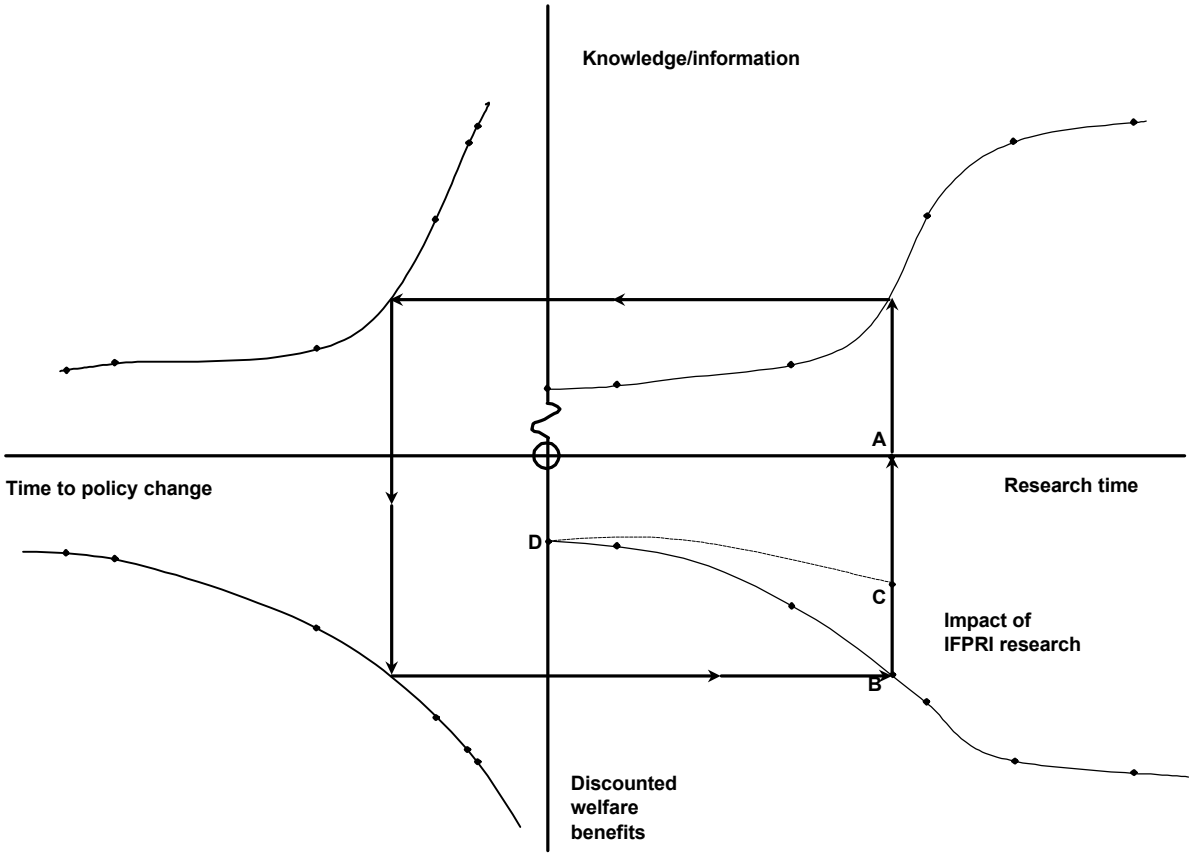
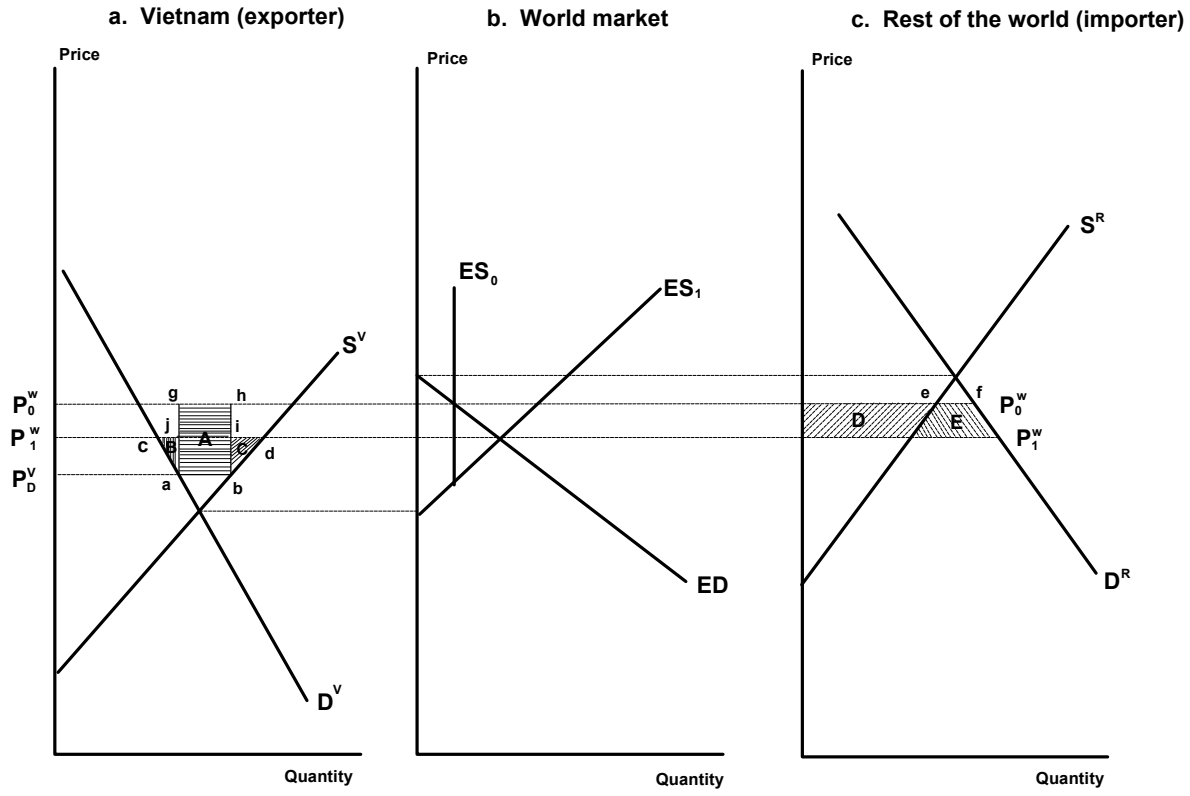


**Figure 4 National and international benefits from removal of rice export quotas**



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