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## **Strengthening market information activities in Vietnam**

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# 1 Executive summary

The emphasis of the project was on building research capacity in agricultural economics within the Ministry of Agriculture and Rural Development with a focus on marketing. One of the most significant outcomes of the project was the redesign of the collaborating Vietnamese agency based on lessons learned international comparison sub-project, particularly the overseas study tours to China, Thailand and Australia. The original collaborating agency was the Informatics Centre, which was subsequently merged with the Institute for Agricultural Economics, given a broader mandate and renamed the "Institute for Policy and Strategy for Agriculture and Rural Development". In addition to its existing duties in providing agricultural economics research, the mandate was broadened to include a role as the strategic think tank for the Ministry. The detailed operational structure of the new Institute was designed after careful consideration of the key benefits of the institutions studied overseas, as well as their relevance to the Vietnamese context. The most influential of the overseas institutes visited was the Chinese Centre for Agricultural Policy, which is a financially autonomous research unit operating within the Chinese government. The report on this study tour (Pham Quang Dieu 2004: CCAP: A vanguard in research system in China, ICARD Policy Briefing Series) has had wide circulation within the Vietnamese government, both within MARD and also Ministries of Science and Technology, Finance, and Internal Affairs because it deals with the problems of institutional reform and incentives within a communist government setting.

A case study was undertaken on fruit and vegetable production and marketing in the northern mountains region (Lao Cai province). In the past few years the fruit market had suffered significant price slumps due in part to the loss of fruit exports to China (due to a free trade agreement between Thailand and China) and also due to increasing domestic production. The research activity investigated the production of longan, plums and choko using producer surveys and key informant analysis. The costs of production were quantified and it was shown that farm production is barely viable at current market prices for plum and longan, whereas choko producers had been less susceptible to recent price slumps despite having significantly higher costs of production. It was also found that longan producers, who had more diverse source of income, were less susceptible to the fruit price slump than plum producers. Characteristics of the marketing chain for each of the three products were assessed. Econometric analysis of data collected from plum producers revealed a negative return to manure input, but further investigation demonstrated two main fertiliser regimes, a low yielding system based on large amounts of manure; and a higher yielding system based on chemical fertiliser with some supplementary manure. Expenditure on nitrogen appeared to be significantly higher than what was required for the yields achieved by farmers using chemical fertiliser. The main problems in the supply chain were related to lack of infrastructure and long transport distance which caused high losses, particularly for plum. Coordination between intermediaries in the supply chain was also a problem. A partial equilibrium model of the plum supply chain was developed to demonstrate the impact of policy initiatives on demand, supply and market prices. For example, it was shown that the main beneficiaries of the local policy makers' plans to increase area planted would be consumers rather than producers, because of the depressing effect it would have on prices. These findings were reported to the local stakeholders at a workshop attended by the Department of Agriculture and Rural Development staff, farmers, and People's Committee members. A consensus was reached by workshop attendees that market promotion, and emphasis on quality rather than quantity, needed to be a key element in future provincial policy direction.

Most of the funding provided to the Australian institutions was to conduct training courses on quantitative economic analysis. Training was organised around three themes, being econometric analysis of demand and prices, mathematical programming for supply and market equilibrium analysis and global trade modelling. Formal training courses were

supplemented by informal mentoring of research activities and the team produced research outputs under each of the training themes.

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## 2 Objectives

The overall goal of this project was to develop capacity in agricultural marketing research. This was approached through four objectives.

1. Conduct a case study on marketing of fruit from the Northern Mountainous regions of Vietnam, focusing on supply chain management and incentives for quality control (in association in PHT project) and on medium term outlook.
2. Study international experience in agricultural marketing and market information services and assess its relevance to Vietnam (Australia, China and Thailand).
3. Make policy recommendations concerning a) marketing in the fruit sector based on case study b) design of an agricultural policy research and market information service using International experience
4. Develop capacity in modelling the agriculture sector for the purpose of analysing marketing policy.

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## 3 Project outputs, outcomes and adoption

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### 3.1 Communication and dissemination activities

Project outputs included written publications and seminar and workshop presentations. As this was a capacity building and policy project, the main dissemination activities were aimed at staff within the Vietnamese collaborating agency and policy makers within the Ministry of Agriculture and Rural Development and its provincial departments.

Most written reports have been published already. Two remaining articles are in the process of publication, these are the IPSARD research report on fruit and vegetable marketing which is expected to go to press in September 2008, and the journal article on coffee marketing which is under preparation.

#### 3.1.1 Publications

1. Tran Cong Thang, Pham Huong Giang and Donna Brennan (2008) Fruit and Vegetables production and marketing systems in the Northern Uplands, the case of Lao Cai province. ISPARD Publication (In press). Attached.
2. Pham Thi Ngoc Linh, M. Burton and D Vanzetti (2008) The welfare of small livestock producers in Vietnam under trade liberalisation- integration of trade and household models, Paper presented at the 11th Annual Conference on Global Economic Analysis, Helsinki, Finland. Available at URL: <<https://www.gtap.agecon.purdue.edu/resources/download/3727.pdf>>
3. Donna Brennan, Tran Cong Thang and Tran Thi Quynh Chi (2007) Vietnamese coffee supply in the global context: Opportunities for strategic supply policies and the implications for prices and income. Paper presented at the IPSARD Coffee Outlook Conference, March 29th – 30th 2007, Melia Hotel, Hanoi, Viet Nam. Attached.
4. Pham Thi Ngoc Linh, Burton, M. and D. Vanzetti (2008) The welfare of small livestock producers in Vietnam under trade liberalisation-Integration of trade and household models, Paper presented at the 52nd Annual Conference of the Australian Agricultural and Resource Economics Society, Canberra, 5-8th February. Available at URL: <<http://purl.umn.edu/6023>>
5. Pham Thi Ngoc Linh, Burton, M., Hertzler G. and D. Brennan (2007) A welfare of small livestock producers in Vietnam under trade liberalisation – a household model approach, Paper presented at the 51st Annual Conference of the Australian Agricultural and Resource Economics Society, Queenstown, New Zealand, 13-16th February.
6. Tran Cong Thang, Tran Thi Quynh Chi, Pham Thi Ngoc Linh and Pham Quang Dieu (2005) A food consumption analysis: the case of fruit and meat products in Vietnam. Centre for Agricultural Policy Research Report (Based on Training course provided by Michael Burton with additional support from World Bank). Attached.
7. Brennan, D. (2005) “Modelling agricultural supply response in Vietnam using GIS and positive mathematical programming” Contributed Paper presented to the 49th Annual Conference of the Australian Agricultural and Resource Economics Society, Coffs Harbour, 8-10th February, 2005. Available at URL: <[www.aares.info/files/2005\\_dbrennan.pdf](http://www.aares.info/files/2005_dbrennan.pdf)>
8. Dang Kim Son and Tran Thi Quynh Chi (2005) Trip report of visit to Australian Institutions (In Vietnamese). Attached

9. Brennan, D. (2004) "Modelling in Excel for policy analysis" Training manual and exercises on constructing partial equilibrium models for agricultural policy analysis. Attached
10. Pham Quang Dieu (2004) CCAP: A vanguard in research system in China, ICARD Policy Briefing Series. (In Vietnamese, Translated version attached).
11. Brennan, D. (2003) Public policy issues in supply chain management. In Johston, G. and Hofpman (eds). Agriproduct Supply Chain Management in Developing Countries. Proceedings of an international workshop held in Denpasar, Bali, Indonesia, 19th – 22nd August, 2003. ACIAR Proceedings 119.
12. Brennan, D. (2003) "Cooperatives in the Agrifood Supply Chain: A Review" in Trewin, R. (ed). Cooperatives: Issues and trends in developing countries. ACIAR Technical Report TR83.

### **3.1.2 Workshops and seminars in Vietnam**

1. Kingwell, R. "Farm modelling for government officials, scientists and farmers: an Australian experience" Half-day workshop attended by 25 officials from various institutions within the Ministry of Agriculture and Rural Development, July 2004.
2. Brennan, D. and Nguyen Ngoc Que "Modelling the agricultural sector: An overview of issues" Workshop attended by representatives of scientific research institutes within the Ministry of Agriculture and Rural Development, November 2004.
3. Donna Brennan "ATPSM: An introduction" 1 hour lecture on the Agricultural trade and policy simulation model of the FAO, attended by researchers from IPSARD, February 2005.
4. Tran Cong Thang, Pham Huong Giang and Donna Brennan "Fruit and vegetable production and marketing systems in the northern uplands: The case of Lao Cai province", Presentation at final workshop of fruit and vegetable marketing case study, Lao Cai City, Lao Cai Province. Attended by leading farmers, local scientists from the Department of Agriculture and Rural Development, and People's Committee Representatives, April 2006.

### **3.1.3 International workshops**

1. Brennan, D. (2003) "Cooperatives in the Agrifood Supply Chain: A Review" Paper presented at the ACIAR Workshop on Cooperatives, Perth, 24th-25th March 2003.
2. Tran Cong Thang (2003) "Fruit and vegetable production in Vietnam and the role of traders in marketing" Paper presented at the ACIAR International workshop on agricultural supply chain management in developing countries, Denpasar, Bali, Indonesia, 19th – 22nd August, 2003
3. Brennan, D. (2003) "Public policy issues in supply chain management" Paper presented at the ACIAR International workshop on agricultural supply chain management in developing countries, Denpasar, Bali, Indonesia, 19th – 22nd August, 2003.

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## **3.2 Farmer-level, community or policy impacts (economic, social and/or environmental)**

The emphasis of the project was on building research capacity in agricultural economics within the Ministry of Agriculture and Rural Development with a focus on marketing. One of the most significant outcomes of the project was the redesign of the collaborating Vietnamese agency based on lessons learned international comparison sub-project, particularly the overseas study tours to China, Thailand and Australia. The original collaborating agency was the Informatics Centre, which was subsequently merged with



the Institute for Agricultural Economics, given a broader mandate and renamed the “Institute for Policy and Strategy for Agriculture and Rural Development”. In addition to its existing duties in providing agricultural economics research, the mandate was broadened to include a role as the strategic think tank for the Ministry. The detailed operational structure of the new Institute was designed after careful consideration of the key benefits of the institutions studied overseas, as well as their relevance to the Vietnamese context. The most influential of the overseas institutes visited was the Chinese Centre for Agricultural Policy, which is a financially autonomous research unit operating within the Chinese government. The report on this study tour (see Dieu 2004) has had wide circulation within the Vietnamese government, both within MARD and also Ministries of Science and Technology, Finance, and Internal Affairs because it dealt with the problems of institutional reform and incentives within a communist government setting.

More generally, the international study tours provided a variety of lessons and ideas that have subsequently informed policy in Vietnam. For example, while in Beijing the group visited the Wholesale Market which is run completely as a private sector (fee-for-service) agency and has been so successful that it is now one of the largest wholesale markets in Asia. Feedback on this model was provided to the Ministry which had been considering how to implement the Hanoi Wholesale Market facility. While in Thailand the group learned of the strategy adopted by the Thai government in reporting on cost of production indicators, which combines detailed farm surveys and between-survey monitoring of farms to keep information up-to-date whilst also reducing implementation costs. These ideas have been applied to several new projects at IPSARD.

While in Australia, the group visited ABARE, the Productivity Commission, and the Economics Division of the New South Wales Department of Primary Industries, as well as several Universities. Some of the key lessons included detailed insights into the structure and operation of ABARE and its link with policy makers; introduction to the concept of public inquiries into industry performance and public monitoring of government performance at the Productivity Commission; exposure to the farm level economic advisory services (gross margin budgeting) at the NSW Department of Primary Industries. These ideas are being incorporated into the design of the new Institute for Policy and Strategy for Agriculture and Rural Development.

The case study on fruit and vegetable production and marketing highlighted the importance of marketing issues in the fruit and vegetable sector, and provided quantitative evidence on the importance of marketing problems at different points in the supply chain from farm to consumer. The partial equilibrium modelling work helped to reiterate the impact of supply expansion on prices in the absence of demand growth. A consensus was reached by workshop attendees that market promotion, and emphasis on quality rather than quantity, needed to be a key element in future provincial policy direction.

Since the emphasis of the project was on capacity building, many of the project impacts were in the form of enhanced capacity in the collaborating institution. These are discussed in the next section.

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### **3.3 Training and capacity-building**

The institutional strengthening provided by these project training activities is evidenced by the output that has been created around the three training themes, which were econometrics, partial equilibrium analysis, and trade modelling.

#### **3.3.1 Econometric analysis of demand and prices**

1. Michael Burton “Modelling demand using the Almost Ideal Demand Systems” Training course held in Hanoi, August 2005.
2. Greg Hertzler “Econometric methods for time series analysis and production economics” Training course held in Hanoi, December 2004.

3. Michael Burton and Greg Hertzler “Advanced econometrics”. Training course held at University of Western Australia and attended by Tran Cong Thang, Pham Huong Giang, Tran Thi Quynh Chi (Crawford Fellow) & Pham Thi Ngoc Linh (John Alwright Fellow). November 2006.
4. Pham Thi Ngoc Linh and Donna Brennan. “Two approaches to demand modelling: The Almost ideal demand system and the Linear Expenditure System” August 2007.

These training courses provided the necessary capacity to produce the report “Tran T.C. et al. (2005) A food consumption analysis: the case of fruit and meat products in Vietnam”. The subsequent training course in 2007 was used by the Agro Info Centre to complete a study on consumer demand for rice in Vietnam.

### **3.3.2 Mathematical programming for supply and market equilibrium analysis**

1. Donna Brennan “Modelling in excel for policy analysis” training course on partial equilibrium modelling.
2. Donna Brennan “Modelling the world coffee market” training course on the global coffee market model developed by Brennan and Tran Thi Quynh Chi, Hanoi, April 2007.
3. Donna Brennan “Partial equilibrium analysis of plum production and marketing in the northern uplands: Application for policy analysis”. University of Western Australia November 2006.

The initial work on market characterisation and data preparation required to build the global coffee market model was assisted by a Crawford Fellowship grant for Tran Thi Quynh Chi. The final paper was presented at the IPSARD's first Coffee outlook conference (Brennan et al 2007) and a journal article from this manuscript is under preparation.

The skills developed in the partial equilibrium training course given by Brennan in Hanoi were applied to investigate the policy issues surrounding fruit marketing in Lao Cai. Additional training was given to the staff involved in the case study activity and the model developed was used to demonstrate the need for more emphasis on market potential when setting policies regarding supply expansion.

Kingwell's course and presentation to the Ministry, on the role of farm modelling for agricultural policy analysis, was well received. The need to develop a capacity in farm performance monitoring, based on maintaining simple gross margin budgets for major commodities and farming systems was identified, but a CARD proposal aimed at improving knowledge of farm level economics across the country (as a pilot for setting up a national farm performance monitoring network) was unsuccessful. However, the ideas have been incorporated into the activities under the new ACIAR project AGB 2005-113.

### **3.3.3 Trade modeling**

1. David Vanzetti and Anna Strutt “An introduction to the GTAP (Global Trade and Agriculture Policy) model” Training Course held in Hanoi.
2. David Vanzetti “Applying the GTAP (Global Trade and Agriculture Policy) model” Training Course held in Hanoi.

The training activities have had a direct impact on two of IPSARD's staff who are currently undertaking PhD research. Following the training course David Vanzetti was invited to UWA to assist in mentoring part of Pham Thi Ngoc Linh's investigation of globalisation impacts on the livestock industry, which include a chapter on a GTAP application. Several papers have been developed by Pham and Vanzetti as shown in the publication list. Another staff at IPSARD (Nguyen Ngoc Que) is using GTAP to study the global rice sector

as part of his PhD dissertation and has directly benefited from the training and mentoring provided by Dr Vanzetti.

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### **3.4 Intellectual property**

No patentable intellectual property was developed during the project.

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## 4 Relationship to other activities

The IPSARD has numerous other projects funded by donors and by the Vietnamese government. Throughout the project the team were consulted on upcoming projects and the activities under the ACIAR project were designed to avoid overlap as well as complement other activities. As an example MISPA.

Similarly, training activities conducted under the present project were supplemented with funding from donors, to maximise the capacity building benefits. For example, funding was provided by the World Bank for the group to analyse demand for fruit and meat in Vietnam. This work built on the initial training by Michael Burton, and the research group were subsequently mentored by Burton throughout the research project. Another example is the funding provided by the Crawford Fellowship for Miss Tran Thi Quynh Chi which was used to provide an additional place at the 4 week training course conducted by Burton, Hertzler and Brennan at UWA. A separate study was commenced on the global coffee market which was subsequently a major activity under the extension phase of the project.

The project case study was selected to take advantage of potential synergies with another ACIAR project on fruit production in Lao Cai province (PHT 2002-086). It turned out to be quite difficult to coordinate the activities of the two projects largely because of differences in timing of the two projects. However, while the ISPARD team were in Australia they paid a visit to the Maroochy Research Station in Queensland where Bob Nissen was located. Dr Bob Nissen gave a lot of useful advice about plum production systems that were used in developing hypotheses for econometric analysis conducted by Ms Giang.

The funding provided in the extension phase of the project enabled the development of a new project proposal which aims to build upon and consolidate the capacity building efforts of the project. Many of the ideas included in new proposal were based upon the lessons learned from this project.

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## 5 The budget

The project budget was spent according to the approved budget, with \$288,774 going to fund activities at the University of Western Australia (largely personnel and travel), and \$110,800 going to fund activities in Vietnam. There was some carryover of funds into the extension phase, which was supplemented with an additional \$64,063 from ACIAR. Expenditure on the extension phase was varied from the original proposal which was largely due to the relocation of Donna Brennan to Hanoi. This saved on travel costs and permission was granted by ACIAR to spend these savings on personnel costs because of the time overrun in finalising activities under the project and in developing the new ACIAR proposal. The total funding providing by ACIAR in the initial and extension phases was \$463,637.

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## **6 Future project plans to build on project outputs / outcomes**

The research team have received funding under a new project (AGB 2005-113) which has been designed to build upon the capacity building efforts of the completed project. In particular, the new project takes a more in-depth research approach and will be developing and refining agriculture sector and global trade models for the purpose of analysing structural adjustment issues associated with globalisation. Without the foundation capacity building provided by the ADP project, this new project would not have been possible.

Exposure to Australian institutions under the project (particularly the visit to ABARE) has led the Vietnamese partners to request a twinning project with ABARE, aimed at further developing the administration of IPSARD as well as enhancing research skills. A project is under development with assistance from the AUSAID CARD program.