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Greater Mekong Subregion–Phnom Penh Plan for Development Management

Research Report Series

Cross-Border Contract Farming Arrangement: Variations and Implications in the Lao People's Democratic Republic

Kanokwan Manorom, David Hall, Xing Lu, Suchat Katima, Maria Theresa Medialdia, Singkhon Siharath, and Pinwadee Srisuphan



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Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel +63 2 632 4444
Fax +63 2 636 2444
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For orders, please contact:
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Abbreviations

ACMECS	-	Ayeyawady–Chao Phraya–Mekong Economic Cooperation Strategy
ADB	-	Asian Development Bank
AFTA	-	ASEAN Free Trade Area
AMAPP	-	Agreed Market on Agricultural Products Project
ASEAN	-	Association of Southeast Asian Nations
BTZs	-	border trade zones
CNY	-	yuan
FDI	-	foreign direct investment
FGD	-	focus group discussion
GMSSC	-	Greater Mekong Sub-region Study Center
GIZ	-	Gesellschaft für Internationale Zusammenarbeit
ha	-	hectare
km	-	kilometer
km ²	-	square kilometer
LEAP	-	Laos Extension for Agriculture Project
PPP	-	Phnom Penh Plan for Development Management
YSM	-	Yingmao Sugarcane Miller

Foreword

The Greater Mekong Subregion (GMS) Phnom Penh Plan for Development Management (PPP) was launched in 2002 to build a core of highly trained development managers in the GMS countries who would play a key role in shaping policy choices towards the vision of a more integrated, prosperous, and harmonious subregion. The PPP's programs for capacity building include (i) learning programs for GMS civil servants, (ii) short-term high impact programs for top and senior level officials, and (iii) dialogues on development issues. In 2004, the PPP initiated the publication of the *Journal of GMS Development Studies*—a multidisciplinary publication that seeks to promote better understanding of development issues in the GMS among planners, policy makers, academics, and researchers.

As GMS countries continue to face increasingly complex challenges of economic development, the knowledge base required to inform policy choices has become increasingly important. Learning courses provide the tools but not the empirical basis for designing policy. Moreover, the differential impacts of policies among various publics need to be better understood to assess the appropriate trade-offs. This policy-knowledge gap is more apparent in the less developed GMS countries where research institutions have limited capacities and resources to conduct policy-based research. Recognizing this, and in an effort to bring its capacity building goal to a higher plane, the PPP Research Program was launched in March 2009 to help promote a more effective link between knowledge generation and policy formulation.

The PPP Research Program aims to engage research institutions in the policy process by supporting scholarly works that would bring multifaceted perspectives on development issues and provide new knowledge on the impacts and consequences of policy choices. By providing resources and opportunities to the GMS research institutions, the PPP Research Program could be a potent and active partner in the development process.

To carry out these objectives, the PPP Research Program provides financial support (grants) and technical assistance to indigenous GMS research institutions and think tanks for conducting research on subregional development issues. The grants are directed to research projects that tackle subregional issues confronting the GMS; this subregional focus intends to ensure that the PPP Research Program's outputs would be useful to the GMS Program agenda, and would not overlap with other research support provided to the study of national development issues.

The PPP Research Report Series features the scholarly works that have been supported by the PPP Research Program. It is hoped that by disseminating the research results to a wide audience, the breadth and depth of the GMS development challenges can be better appreciated and understood by policy makers, implementers, and other stakeholders in the subregion. Through this, the PPP Research Program would have made a modest contribution in responding to the opportunities and challenges brought about by greater economic integration in the subregion.

Alfredo Perdiguero
PPP Program Manager

Abstract

This paper presents the variations and implications of contract farming arrangements in three case studies—cabbage, maize, and sugarcane—in the Lao People’s Democratic Republic (Lao PDR). The variations in contract farming resulted in varying implications in terms of agreement types, degree of flexibility, extent of material support, and strength of relationships between the contracting farmer and the firm. Overall, contract farming has resulted in beneficial material and non-material outcomes for the Lao PDR farmers as observed in the three case studies. The extent of the benefits varies according to the contract farming arrangement. The results of the case studies strongly suggest that there is no single contract farming model that can work best in all situations, and that contract farming models are crafted to address certain production and marketing limitations that prevent efficient functioning of industries and markets. However, considering the higher levels of access to services of contract farming farmers and the high levels of overall satisfaction with contract farming, it would appear that engaging in contract farming is a valuable way to enter into commercial, cross-border agriculture. The policies promoting cross-border trade and small-scale contract farming appear to be generating positive results and should be maintained and enhanced.

1. Introduction

This study on Cross-Border Contract Farming Arrangement: Variations and Implications in the Lao People's Democratic Republic was supported by the Asian Development Bank (ADB) under its Phnom Penh Plan for Development Management (PPP). The research was conducted in the context of rapidly increasing regional trade in agricultural produce between the Lao People's Democratic Republic (Lao PDR) and neighboring countries, which has been facilitated by a number of multilateral and bilateral agreements and infrastructure development projects. To benefit from the opportunities provided by increasing regional trade, the Government of the Lao PDR is promoting foreign direct investment (FDI), commercial agriculture, and contract farming agreements of different types.

However, there are concerns that the rapid growth in contract farming may have differential benefits for Lao PDR smallholder farmers if they are not provided with the necessary support to enable them to benefit from the emerging opportunities. Through a series of case studies and hypothesis testing, and considering related research findings, this study seeks to provide policy makers with guidance on how best to make contract farming beneficial for Lao PDR smallholder farmers.

As contract farming in the Lao PDR is relatively new, having been promoted only in the last 5 years, most reports focus on the impacts of large-scale concession farmers, with relatively few studies addressing the economic and social benefits of small-scale contract farming or the types of contract farming that are most beneficial to the poor. This report focuses on small-scale farmers using their own land and labor to supply cabbage, maize, or sugarcane to buyers from the People's Republic of China (PRC) and Thailand.

The basic definition of contract farming in this study covers any farmer who grows crops under an agreement with a buyer, written or verbal. This definition is somewhat broader than that which is commonly used internationally. However, this definition made it possible for the study to explore the wide range of contract farming arrangements, and their outcomes across diverse case studies. It should be stressed that the common focus is on smallholder farmers and their buyers, as opposed to large concession farms which are not covered in the study.

The study involved close collaboration between five different organizations: (i) the Mekong Sub-region Social Research Center, based at Ubon Ratchathani University, Thailand (the lead institute); (ii) the Greater Mekong Sub-region Study Center, Yunnan University, PRC; (iii) Champasak Agriculture and Forestry College, Lao PDR; (iv) the National University of Laos, Vientiane, Lao PDR; and (v) the Mekong Institute, based at Khon Kaen University, Thailand. The study team was comprised primarily of social scientists; hence, the perspective taken is largely sociological, with "benefits" being understood to be more than the profits derived from contract farming and cross-border trade in contract farming crops.

Identifying the factors that influence contract farming is a complex task since a wide range of variables can determine the outcomes. Hypothesis testing is a useful way to identify the key independent variables, such as contract farming type, that influence outcomes (the dependent variables); however, it constrains the analysis to a limited set of topics. In the course of the study, information was collected, through both qualitative and quantitative methods, on important contract farming issues not covered in the hypothesis testing, such as motivating factors, management of disagreements, and the role of production groups. The data collected have been summarized in this report in relevant sections.

The results presented in this report will show that, overall, contract farming has beneficial material and non-material outcomes for Lao PDR farmers growing cabbage, maize, and sugarcane. Further, as stated in the hypothesis, the extent of these benefits varies according to the contract farming arrangements, although not always in the anticipated direction. The fact that many noncontract farmers obtain slightly

higher profits from the same crops than their counterparts suggests that contract farming is by no means the only way to benefit from the production of export crops. However, taking into consideration the higher levels of access to services of contract farmers and their high levels of overall satisfaction with contract farming, it would appear that engaging in contract farming is a valuable way to enter into commercial, cross-border agricultural trade. Production groups seem to provide support for farmers. By and large, as noted in the final section, the policies promoting cross-border trade and small-scale contract farming appear to be generating positive results and should be maintained and enhanced.

The main report contains 10 sections in addition to this introduction: key research questions, objectives, and methods; conflicting views of contract farming internationally and in the region; country context; case study contexts; hypothesis testing and conceptual framework; farming status; results of hypothesis testing; other important findings; and conclusions and policy recommendations.

2. Key Questions, Objectives, and Methods

2.1 Research Questions and Objectives

The key research question is: What are the best contract farming models, policies, and supportive mechanisms that might offer poor, small-scale farmers in the Lao PDR the most equitable sharing of risks and benefits?

The objectives of the research are to

- i. study variations in the outcomes of cross-border contract farming relationships through three case studies (cabbage, maize, and sugarcane); and
- ii. offer recommendations on how to improve cross-border contract farming in order to benefit small-scale Lao PDR farmers.

2.2 Methods

Common quantitative methods were used so that data could be compared across the different research sites. At the same time, qualitative methods allowed for flexibility in the approaches within the three case studies.

The literature review covered contract farming as practiced both internationally and within the region. This review helped to clarify contract farming concepts and shed light on the major contract farming questions facing policy makers in the Lao PDR. The results of the review informed the design of the various research instruments, notably the household questionnaire.

Before the major data collection took place, the study teams conducted pre-tests by making preliminary field visits to familiarize themselves with contract farming conditions in the field, interviewed officials, identified key issues, and pre-tested the data collection instruments.

Data collection techniques used in all areas included (i) farmer survey, (ii) in-depth interview with village heads, (iii) key informant interviews, (iv) focus group discussions, (v) secondary data collection (e.g., district statistics), and (vi) workshops and meetings. Details of each technique follow.

A highly structured, common questionnaire was used to obtain quantitative data from farmers. The questionnaire was first developed in English, with the participation of the different institutes, before

it was pilot tested in the field. Once finalized, the questionnaire was translated into Lao, then again translated back into English.

Sampling was done to select the study sites and key informants. Field tests done during the design phase of the study showed that farmers grow crops under diverse agreements and relationships with buyers. While some farmers are in well-structured relationships, under which buyers provide specific inputs in return for crops to be delivered, others operate in a more flexible manner. To compare and contrast farmers selling crops under some kind of a contract or agreement with those who sell to any buyer without prior agreement, the sample was split into two categories: contract farmers and noncontract farmers. The former included contract farmers that had recently stopped farming under agreements (ex- contract farmers). The agreed sample size, following comments from the project advisor, was 200 in each site, evenly split between contract farmers and noncontract farmers.

The identification of cabbage and maize study sites was made with the assistance of district officials and village heads using an approach known as convenience sampling.¹ Normally, this would not allow for generalizations to be made about a general population, but given the specificity of the target group this method was thought to be suitable. There were 13 villages selected in cabbage areas and 15 selected in maize areas.

The study sites for sugarcane were identified using a 2008 village census list. This census was carried out by Gesellschaft für Internationale Zusammenarbeit (GIZ) in Muang Xing County (where most sugarcane production is concentrated along the major transport road to the PRC). Initially, the sugarcane study team selected 5 villages with sugarcane and 5 without sugarcane. However, the team soon found that it was difficult to find enough households and had to expand the number of sample villages to 15. The team used convenience sampling method to identify households, with the help of the village heads.

In all, 619 farmers answered the questionnaire, with the division between contract farmers and noncontract farmers being virtually equal in the three areas.

Village data collection was done by way of in-depth interviews with village heads and a simple checklist was used to cover basic infrastructure and services supported by the government and/or nongovernment organizations.

Open-ended key informant interviews were conducted with company and district officials on both sides of the border.

Focus group discussions (FGDs) in the different case study areas were generally composed of four different types, with 7–10 villagers in each group: (i) male contract farmers, (ii) male noncontract farmers, (iii) female contract farmers, and (iv) female noncontract farmers. The participants joining the FGDs were selected by the village leaders in consultation with the researchers and the local government officers.

Secondary data collection was done using government policies on investment, social welfare, and trade; and from study reports on contract farming at the national and provincial levels.

¹ Convenience sampling (sometimes known as grab or opportunity sampling) is a type of nonprobability sampling involving the selection of samples from that part of the population which is close at hand. That is, a sample population is selected because it is readily available and convenient. The researcher using such a sample cannot scientifically make generalizations about the total population from this sample because it would not be representative enough. [http://en.wikipedia.org/wiki/Sampling_\(statistics\)](http://en.wikipedia.org/wiki/Sampling_(statistics))

Workshops and meetings were held at the research sites for the sugarcane case study only. After the fieldwork was completed, feedback was given to local stakeholders. During these meetings, the policy “mind maps” were shared for discussion, along with other preliminary findings to obtain stakeholders’ views.

3. Conflicting Views of Contract Farming Internationally and in the Region

3.1 Varying Definitions and Models of Contract Farming

The literature review indicated that a variety of definitions of contract farming exist. The Food and Agriculture Organization of the United Nations (FAO) (2001 cited in Laos Extension for Agriculture Project [LEAP] 2007:1) defines contract farming as “an arrangement between farmers and processing and/or marketing firms, for the production and supply of agricultural products under forward agreements, frequently at predetermined prices. The arrangement also invariably involves the purchaser in providing a degree of production support through, for example, the supply of inputs and the provision of technical advice.” The basis for such arrangements is a commitment, on the part of the farmer, to provide a specific commodity in quantities and at quality standards determined by the purchaser; and a commitment on the part of the company to support the farmer’s production and to purchase the commodity.

According to the literature review, the extent to which farmers benefit from contract farming appears to depend, at least in part, on the type of contract farming adopted. Eaton and Shepherd (2001, cited in Songsak and Aree 2008:4) group contract farming types into six models according to the crops or products, objectives, resources of the contractor, and experience of the farmers. They are as follows:

- i. **Centralized model.** In this model, all the production processes are highly controlled by large firms such as sugarcane companies.
- ii. **Nucleus estate model.** This model is suitable for commodities requiring immediate processing after harvest, or high production and management technologies that farmers lack. Typical commodities include broilers, hogs, and eggs.
- iii. **Intermediary and multipartite model.** Under this model, extension officers play a role as both coordinators and monitors. Farmers and firms work together under a clear, written contract. Firms support farmers by providing seed, credit, and training.
- iv. **Formal model.** In this model, middlemen buy products directly from farmers and sell them to either processing companies or the fresh market.
- v. **Partly informal model.** This model involves a written contract between farmers and middlemen. Farmers have to sell their product in a timely manner to middlemen, and the middlemen sell the products to processing companies. The middlemen may, or may not, have written contracts with processing companies.
- vi. **Informal model.** This type of contract farming is similar to the partly informal model, but the difference is that all the contracts between farmers and middlemen and between middlemen and companies are informal contracts or unwritten contracts. This model may involve just a few market agents.

Eaton and Shepherd (2001) concluded that each type of contract farming model will impact pricing and benefits, and that each type will generate both successes and failures for poor farmers. This conclusion

appears to be somewhat superficial. The authors did not adequately explore or empirically demonstrate the significant variations that occur between models with regard to risk and benefit sharing.

Zola (2008) placed emphasis on how different models can impact contract farming outcomes. In his review of contract farming in the Lao PDR, he describes five modalities in the agriculture and natural resources sector, namely:

- i. the **wholesale market model** operating with domestic investment,
- ii. plantations established on **land concessions** granted by the government,
- iii. the **concession share-croppers' model** (a variation of the land concession model),
- iv. the **producers' association model**, and
- v. the **independent farmers' group model**.

3.2 Different Views of Contract Farming

Studies that discuss the benefits of contract farming reflect conflicting points of view. Some of the evidence shows contract farming bringing a wide range of benefits to rural areas. Globally, there appears to be evidence that contract farming has successfully promoted high-value food products in developing countries and that this has led to the emergence of “New Agricultural Countries” (Patrick 2004). Reardon and Berdegúe (2002) found that farmers enjoy the benefits of contract farming because frequent sales to supermarkets give them a more regular income. Consumers tend to see contract farming as a more politically acceptable form of agriculture than large concessions or estates, while investors see it as a way of overcoming land acquisition constraints. The investors also favor contract farming because their risks are reduced by not being directly responsible for production and because more consistent quality can be obtained than if purchases were made on the open market (Eaton and Shepherd 2001; Patrick 2004; Songsak, and Aree 2008; Setboonsarng 2008).

A key argument in favor of contract farming is that it has the potential to incorporate low-income growers into modern technology through private-driven efforts whereby inputs are provided in exchange for specified crops. Through contracts, the buyers provide significant inputs such as credit, information, reliable markets, and services. In this way, smallholders are supported and enabled to cultivate lucrative non-traditional crops. Proponents of contract farming argue that this brings positive multiplier effects for employment, infrastructure, and market development in the local economy (Key and Rusten 1999, Sautier 2006). Studies of rice contract farming in neighboring Cambodia by Cai, Ung, Setboonsarng, and Leung (2008) found that contract farmers, in comparison to noncontract farmers, had greater opportunities to obtain stable markets, access to credit, extension services, infrastructure, and other benefits.

Improved income is the key benefit identified by proponents of contract farming. Rice and Watts (1993) found that farmers involved in contract farming in northeast Thailand were reaping a number of benefits. The authors found empirical evidence of substantial amount of cash flow within the villages involved—new pickup trucks, communal projects, and private construction.

On the other hand, a number of authors present evidence of contract farming being detrimental to the poor (Goodman and Watt 1997, Tiongco et al 2009, Rosset 2009). Many of the studies reviewed take a pessimistic view of contract farming, emphasizing a wide range of problems which include limited benefits for small-scale farmers, unequal power relations, disputes within participating households, market failure, production difficulties, food insecurity, health hazards, loss of new varieties to diseases and pests, fluctuating global prices, and limited benefits for landless people.

A key issue raised by those critical of contract farming is that it rarely provides benefits for the poor and landless. For example, studies of contract farming in the PRC on supply chains suggest that contracting firms generally favor contracts with larger farms and tend to bypass smaller producers. Certain types of contract farming require relatively high levels of farm managerial skills, which farmers often lack. As a result, they are often at risk of breaking contractual agreements or of taking on the full risk of crop failure due to seasonal factors such as drought or floods (Rosset 1997; Rosset and Rice 1999; Coulter et al 1999; Guo, Jolly, and Zhu 2005).

Contract farming can also be a cause of conflict. Within the participating households, Carney and Watts (1990) found that contract farming, as practiced in Africa, disrupted power relations and increased tensions. Disputes between male heads of households and their wives and children, relating to contract farming practices and decisions, were frequent. Contract farmers often have to rely on cash from high-value crops, giving up land previously used for staple foods for home consumption, and this potentially makes households more vulnerable to food shortages.

Delforge (2007) is also critical of the impact of contract farming on the small-scale farmer. Although farmers are motivated to join contract farming in order to get a more secure income, inputs, and a certain market, the research reveals that small farmers are exploited and highly controlled. Certain Thai nongovernment organizations are even more critical, claiming that contract farming is a form of "slavery contract," enabling the companies to completely control the farmer's decision making on farm management. The contract makes the farmer a mere laborer on his own farmland (Isan Alternative Agricultural Network 2008).²

Most of the literature reviewed on contract farming focuses on economic aspects. Other equally important components of contract farming need further investigation. These include how the various types of contract farming influence outcomes socially and economically, with particular reference to profits, farming capacity, access to services, and the strengthening of the relationship between growers and buyers.

4. Country Context

The position of the Lao PDR, as a relatively poor country surrounded by wealthier neighbors (Cambodia, the PRC, Thailand, and Viet Nam), creates conditions favorable for contract farming. The Lao PDR is categorized by the United Nations as one of the world's least developed countries, with one of the lowest per capita gross domestic product in the region (\$765), a weak human resource base, and a high level of economic vulnerability (Rigg 2005). In recent years, economic reform has opened the country to foreign direct investment (FDI). Regional trade agreements and new transport and communication infrastructure are accelerating the integration of the Lao PDR's rural areas into the wider regional and global economy.

Within this context, contract farming is emerging as a mechanism that has the potential to lift small-scale farmers out of poverty, but only if it is well managed. The sections that follow seek to identify the key factors that make the Lao PDR attractive for contract farming and to highlight the issues that are addressed in the course of the current research. As there is limited literature available on contract farming in the Lao PDR (as opposed to other parts of Asia), extensive use has been made of reports focusing specifically on this topic.³

² <http://www.esaVOICE.net/esanvoice/know/show.php?Category=topreport&No=1850>

³ Notably: T. Zola, 2008. *A Preliminary Assessment of Contract Farming Arrangements and Plantations in the Agriculture and Natural Resources Sector of Southern Lao PDR*; and D. Fullbrook, 2007. *Contract Farming in Lao PDR: Cases and Questions*, for Laos Extension for Agriculture Project (LEAP).

4.1 Demography, Accessibility, and Cash Income Needs

The population of the Lao PDR was estimated at 6.8 million in early 2009,⁴ with a population density of 27 per square kilometer (km²). The bulk of the population lives in low-lying areas along the Mekong River valley and its tributaries.⁵ Relative to Thailand and Viet Nam, the Lao PDR is sparsely populated. The disparity in population density is a fundamental factor driving contract farming: the high population density in neighboring countries underpins demand, while the low density and availability of land in the Lao PDR create opportunities for farming.

In the Lao PDR, the areas most accessible by road or river transport are the most densely populated, while the upland areas are more sparsely populated, poorer, and often inaccessible by vehicle. Investors looking at the potential of agricultural projects are attracted by the potential of the more accessible, low-lying areas with a larger work force available nearby. Attracting investment to remote areas remains a challenge, although niche market opportunities exist due to the specificity of the upland climate and vegetation (Zola 2008).

One factor working in favor of Lao PDR farmers is the complaint that Thai farmers have too many market options and are liable to break contracts if a more attractive offer is made. Some buyers are now turning to the Lao PDR in the hope that the more limited market options will encourage farmers to stick to their supply agreements (Fullbrook 2007).

Subsistence rice farming engages the bulk of the rural population, especially in the lowlands. Despite the rapid growth of the energy, mining, and tourism sectors, an estimated 80% of the national population is still employed in agriculture, producing 34.7% of the gross domestic product in 2008.⁶ The bulk of farming is done using non-mechanized, traditional farming methods without commercial inputs. A shift to contract farming, which generally entails the adoption of new crops, technologies, and standards, is a radical departure from the type of farming Lao PDR farmers have passed on from one generation to another.

Rural households have high levels of food self-sufficiency; the bulk of the food consumed is either grown by the household, collected, or caught in the surrounding environment. However, by contrast, their cash incomes are low, with many being unable to afford the type of modern assets and education that are particularly in demand by the younger generation that tends to look for a future beyond farming (Zola, Interview, November 2009).

The high levels of food self-reliance are a factor that may discourage Lao PDR farmers from switching to contract farming. On the other hand, the growing need for cash incomes is a factor motivating many farmers to consider engaging in contract farming. Fullbrook (2007) has different views from Zola and he presents evidence of subsistence farmers losing their self-sufficiency when shifting to contract farming. This is especially the case where farmers are encouraged to use commercial fertilizers and insecticides for the first time and then become dependent on these inputs.

⁴ US Department of State. Background Note: Laos. <http://www.state.gov/r/pa/ei/bgn/2770.htm>

⁵ About half of the country's people are ethnic Lao. They are the principal inhabitants of the lowlands as well as the most politically and culturally dominating group nationally. Austro Asiatic (Mon-Khmer and Viet-Muong) tribes, formerly known as Lao Theung or mid-slope Lao, are predominantly in the central and southern mountains.

⁶ http://devdata.worldbank.org/AAG/lao_aag.pdf

4.2 Past Challenges and New Opportunities

Lao PDR farmers faced a series of challenges in the 20th century, including a prolonged civil war (1953–1975); carpet bombing of large swathes of arable land during the final phases of the American war (1968–1973); and collectivization of farmers, resulting in farmers having to give up private ownership of land, livestock, and equipment (1976–1985). However, in 1986, the government introduced the New Economic Mechanism,⁷ which entailed a fundamental shift from a planned economy, managed by the state, to a free market economy with very little state interference. It brought an end to collective farms and price controls: farmers were once again free to return to their farms and engage in farming and marketing activities of their choice, which they promptly did *en masse* (Riggs 2005).

Since the introduction of the New Economic Mechanism, the Lao PDR has moved steadily to strengthening its relations with neighboring countries and participating in regional and international bodies. The Lao PDR became a member of the Association of Southeast Asian Nations (ASEAN) in 1996.⁸ The United Nations Development Programme (2006) reports that since joining the ASEAN Free Trade Area (AFTA), the Lao PDR has improved its economy, particularly through trading with neighboring countries, especially the PRC, Thailand, and Viet Nam. Further afield, trade links with the European Union and Japan have also improved. As will be seen, it is the links with the neighboring countries that have had the most significant effect on the growth of contract farming, although a number of interesting contract farming projects involving France, Japan, and other countries from outside the region were noted during the literature review.

In concrete terms, the growth in regional trade has been realized, at least in part, through the creation of border trade zones (BTZs). Two BTZs have been established, with the first, the Dansavanh BTZ, located strategically on Route 9 of the Greater Mekong Subregion East–West Corridor in Savannakhet Province which borders Viet Nam. The second one is Boten BTZ, which is located in Luangnamtha Province, sharing a border with the Yunnan Province, PRC. The BTZs aim to support trade activities and to encourage Lao PDR expatriates, foreigners, and foreign nationals living in the Lao PDR to invest in the BTZs (Development Analysis Network 2005). Regulations and preferential policy practices in the BTZs include land leasing, duty and taxation incentives, investment licenses, and migration opportunities (Development Analysis Network 2005).

FDI has greatly stimulated economic growth, playing a key role in poverty reduction. In 2008, the Lao PDR economy grew by 7.2%, similar to its average growth rate over the past 5 years. The high growth rates contributed to a decline in the poverty incidence, from 33% in 2002 to around 28% in 2008.⁹ Most of the growth was due to continuing investments in mining, hydropower, and services, with agricultural growth, at 2.0%, being below the average.

New opportunities raise expectations. Fullbrook (2007) described cases in the Lao PDR where farmers were given chili to plant. The company promised yields based largely on Thai experience. However, conditions in the Lao PDR cannot be compared with those in Thailand: human resources (education and skills training) and technology are vastly different. When the Lao PDR farmers failed to obtain the predicted yields (some obtained less than one-fifth of the amount promised), they were hugely disappointed and were reluctant to engage in contract farming further.

⁷ More evocatively termed *Chin Thanakaan Mai*, or “New Thinking” (Rigg 2005).

⁸ Participation in ASEAN Free Trade Area (AFTA) opens up opportunities for trade with other members. The tariff on export items on particular lists will be gradually reduced to 0%–5% by January 2015 (Development Analysis Network 2005).

⁹ <http://www.adb.org/Documents/Books/ADO/2009/LAO.pdf>

4.3 Evolution of Contract Farming in the Lao People's Democratic Republic

The government believes that poverty can only be effectively alleviated through a shift from subsistence to commercial agriculture. This is reflected in the Sixth National Socio-Economic Development Plan, 2006–2010, which clearly states that the government will continue to develop agriculture and the rural economy through the “promotion of commercial agriculture” (LEAP 2007) and mentions (for the first time in an official plan) cross-border contract farming as an important agriculture sector strategy for poverty reduction.

Although the government announced (as a follow up to the development plan) that contract farming would be the preferred alternative to concessions and plantations at the provincial level, the promotion of commercial agriculture is most strongly associated with the provision of concessions. In recent years, hundreds of thousands of hectares (ha) of land have been opened up to regional and international investors in the form of concessions. Most of the concessions have been provided on very favorable terms, for periods of 30 or more years and at amounts averaging \$6 per ha per year. While these concessions have certainly attracted FDI, particularly in rubber, sugar, coffee, fast growing trees, vegetables, and biofuel, there is mounting concern that insufficient attention has been given to the environment and social costs and that the government has effectively “lost control of the process” (Hanssen in Zola 2008).

Most concessions do not bring concrete benefits to local farmers, other than occasional employment, as their operations do not include contract farming arrangements (the concessions are managed by paid staff). However, there are examples of successful links being forged between concessions and local farmers, which suggest that this form of FDI can have positive outcomes for local farmers. For example, the Mitr Lao Sugar Company, a private Thai investment in Xaybouly and Champhon districts, Savannakhet Province, operates a 10,000-hectare nucleus sugarcane estate with 660 contract farmers working on 2,048 ha with written contracts as outgrowers (Zola 2008).

4.3.1 Creation of Wholesale Markets

The participation of smallholder farmers in contract farming is being promoted in certain parts of the Lao PDR through the construction of wholesale or “primary” markets. Six wholesale markets have been constructed through the Asian Development Bank (ADB)-supported Smallholder Development Project at a cost of approximately \$150,000 each (Zola 2008). The wholesale markets provide a sanitary area where farmers, traders, and even agro-processors can conduct business. Those funded by the project include market information systems as well as technical training, workshops, and trade fairs; while the government provides other supporting activities. The wholesale markets are supervised by district authorities, through management contracts that provide farmers’ associations with the opportunity to act as a market management group. Farmers and traders rent space from the group where they can conduct business and negotiate informal contract farming agreements.

The farmers also benefit from the fact that they no longer have to take their produce to the border. In the case of the Pakxong District Wholesale Market in Champasak Province, farmers save 200 kilometers (km) of travel, a significant saving in terms of transport costs and time (although the price differences are not known at this stage). Other benefits provided by the market management group include:

- i. certification of weights and measures;
- ii. identification, screening, and registration of foreign companies interested in purchasing produce from producer groups;
- iii. promotion of crops in demand by local and regional traders; and

- iv. provision of assistance to Lao PDR authorities by provincial Thai authorities in negotiating with Thai companies.

Although there are no written contracts, there is evidence that wholesale markets are encouraging the growth of contract farming. In the case of Pakxong District, for example, Zola (2008) found that about 30% of the Lao PDR farmers were receiving credit, in the form of seeds, chemical fertilizer, and pesticides, from Thai traders. These are advanced on the basis of trust in return for crops at an agreed price.

4.3.2 Creation of Farmer Organizations

There is evidence from the literature that the creation of farmers' organizations strengthens the position of small-scale farmers entering into contract farming. For example, in the case of Pakxong, Zola reported that the District Agriculture and Forestry Office has organized 23 producer groups to produce coffee, cabbage, bok choy, and banana for the wholesale market. Once farmers are organized in this way, it becomes feasible to offer basic extension services, such as advice on new crops and market access information.

The formation of farmers' organizations has been encouraged under the ADB-funded Smallholder Development Project. By October 2007, the project had initiated 119 producer groups in four provinces. Zola argued that such groups can facilitate relations and economically empower smallholder farmers in their negotiations with private sector companies. The firms benefit by not having to deal directly with individual farmers but having harvesting and transport organized by local representatives of the farmers. This is the case in the Charoen Pokphand Project in Khammouan Province, where an investor from Thailand organized farmers into maize producer groups in several villages covering an area of 4,800 ha, beginning in the 2008 wet season.

Importantly, Zola (2008) noted that relationships can sour, as happened in Nam Bok District, Luangprabang Province. Here several PRC and Lao PDR–PRC joint venture firms promoted white sesame, corn, groundnuts, and vegetables for export to the PRC through farmer producer groups. These failed, however, apparently because the purchasing company did not always return to buy the produce even when the firms provided seeds and small quantities of chemical fertilizer on credit.

One reason for buyers not taking a product is the poor quality of the crop. Fullbrook (2007) described cases where buyers rejected chili that had been grown under contract in northern Lao PDR: the harvest contained green chili beans, while the contract stipulated only red; and some of the crop showed signs of fungi, while farmers had been instructed to uproot any infected plants. Had the farmers' group been more vigilant in ensuring that its members adhered to these details of the contract, the crop may have been accepted. Hence, it is clear from the literature that contract breaches occur on both sides of the agreement, and that a key aim of future efforts should be to minimize these.

The most advanced producer groups are full-fledged cooperatives, such as the Ban Vang Gnao Coffee Producers Group in the Bolaven Plateau. These cooperatives have been operating for many years and now add value to their products (such as by roasting and packaging coffee beans) and are aiming for niche markets (such as fair trade and organic produce). There are clearly lessons that can be learned from these well-established groups and from their experience in ensuring quality control and optimizing benefit flows to the group members.

5. Case Study Contexts

Three research sites, with agribusiness and cross-border contracts between the Lao PDR and its neighboring countries, were selected for the study: Luangnamtha Province in northern Lao PDR, Xayabouly Province in northwestern Lao PDR, and the town of Pakxong in Champasak Province in southern Lao PDR (Figure 1). During the inception phase of the study, preliminary visits were conducted in these areas to identify the most important crops for the study and to find out which crops could be cross-border traded.

In **Luangnamtha Province**, most of the investments are in agricultural products, notably sugarcane—which is the predominant crop—rubber, corn, rice, melon, and banana. Many villagers are now engaged in contract farming, marketing their products via local or PRC traders to the PRC. Constraints faced by the farmers in this area include the high costs of cross-border trading; fluctuating prices; limited access to technology, market information, and credit; and weak negotiating positions with traders on prices.

Contract farming arrangements differ across crops. Sugarcane and rubber are often contracted from a centralized estate. Some firms directly contract farmers to manage the crops, providing technical support, seeds, fertilizers, and the market. In the case of rice and corn, firms initially took a centralized approach but are now increasingly purchasing directly from farmers through informal agreements as farmers acquire the necessary production skills. Watermelon and banana are usually produced through partially formal or informal contract farming agreements. Sugarcane was selected as the product to be studied in Luangnamtha Province because it can provide many insights into the complexities of contract farming. Sugarcane contract farming has been practiced for more than 10 years and has the longest, continuous form of contract farming. It is obvious that the contract farming arrangement is well developed and implemented. Both the farmers and the company have gained experience from its implementation. Local Lao PDR officials recognize that it is a typical “2+3” model, where farmers provide land and labor (2) while the company takes care of capital, production technology, and market (3).

Farmers in **Xayabouly Province** grow maize, mainly for the export market in Loei Province in Thailand. Middlemen normally work with village heads, or *Taseang*, to encourage them to promote the growing of hybrid maize. Most middlemen offer inputs, on credit, to farmers; however, the farmers have to go through the *Taseang* or the head of the Contract Farmers’ Group who acts as guarantor. A key problem faced by the farmers is the lack of relevant information. As a result, they sell at unfair, low prices to middlemen. They also have no idea about how much is required by the processing factories in Thailand and so they are not in a position to plan wisely. This lack of knowledge of market requirements also means that farmers are not able to work toward better prices, for example, by decreasing the moisture content of their produce, or by grading and undertaking preliminary processing.

Cabbage is one of the crops grown by contract farmers under contract farming agreements between Champasak Province in the Lao PDR and Ubon Ratchathani Province in Thailand. Here contract farming is expanding dramatically, with Thai business groups cooperating with local partners in growing cabbage and other crops including banana, tamarind, macadamia nuts, and horticultural crops, such as asparagus. Investment is estimated at around B600–B700 million. Cabbage farming was selected for the case study because trade in cabbage has been growing steadily over the past 5 years and the authorities of Champasak Province have a special agreement called the “Agreed Market on Agricultural

Products Project” (AMAPP) with Ubon Ratchathani Provincial Commerce,¹⁰ following the Ayeyawady–Chao Phraya–Mekong Economic Cooperation Strategy (ACMECS).¹¹ The term “AMAPP,” coined by ACMECS, was used instead of “contract farming” because many of the cross-border crops traded between the two provinces, including cabbage, are not on the list of ACMECS crops.

Generally, the contract models found in **Pakxong District** in Champasak Province, as seen in the case of cabbage, are mixed between formal and informal forms. The contractors are mostly companies and middlemen from Thailand. Both lowland and highland farmers have responded to contract farming opportunities and, with the encouragement of the local authorities, are producing banana, cabbage, tamarind, coffee, melon, and other crops. Most products are exported to Thailand and Viet Nam. The government provides support to farmers through training and the provision of infrastructure, such as warehouses. Companies generally provide credit and inputs. Both verbal and written contracts are used. Ubon Ratchathani Province in Thailand is the biggest wholesale market for contract farming crops, especially for cabbage and banana from Champasak. The Thai companies and middlemen come to buy these crops from the wholesale market and deliver them to the lower part of the northeastern region of Thailand and to Bangkok.

5.1 Cabbage Case Study

5.1.1 Geographic and Socioeconomic Context of Pakxong District

The cabbage case study took place in Pakxong District in Champasak Province in southern Lao PDR, located not far from the provincial capital of Pakse. Champasak Province has the lowest poverty rate in the south of the country, and ranks second only after Vientiane, in terms of access to basic health and education services. Household expenditure in the province is slightly above the national average and the highest in the southern region of the Lao PDR. However, much of the economic growth of recent years has been concentrated in and around the town of Pakse and along the main roads.¹²

Pakxong District has an area of 4,010.6 km², and a population of about 60,000 living in 84 villages (2009). This district is located on the Bolaven Plateau, with an average altitude of 1,300 meters above sea level.

The district is very fertile, which villagers attribute to ancient volcanic activity on the plateau. Due to the altitude temperature being relatively low, the temperature can drop below 20 degrees Celsius and can range from about 25 to 30 degrees Celsius in the day. The district receives abundant rainfall (1,400–2,000 millimeters per year) and is well known as the Lao PDR's coffee capital¹³. Besides coffee, other cash crops grown in the area include cabbage, banana, bok choy, cotton, black sesame, among others.

¹⁰ Thailand's Ubon Ratchathani Province is in the “Emerald Triangle,” an area with a potential for developing economic and tourism cooperation between Cambodia, the Lao PDR, and Thailand. Chong Mek is a very important border checkpoint between Ubon Ratchathani and Champasak provinces. In 2009, B936,571 million was generated through cross-border trade between the Lao PDR and Thailand. Some of the imported goods that contributed to taxes generated were clothes, utensils, logs, wooden crafts, and agricultural goods such as cabbage and green banana from the Lao PDR (2009 Annual Report of Phibunmangsan Border).

¹¹ ACMECS was set up in 2003, as a political, economic, and cultural organization formed by Cambodia, the Lao PDR, Myanmar, Thailand, and Viet Nam. At the special ASEAN Summit on Severe Acute Respiratory Syndrome (SARS), held in Bangkok on 29 April 2003, Prime Minister Thaksin Shinawatra raised the idea of establishing what was then called the “Economic Cooperation Strategy,” with the leaders of Cambodia, the Lao PDR, and Myanmar. The objectives of this new initiative were to bridge the economic gap between the four countries and to promote prosperity in the subregion in a sustainable manner. It was hoped that a stronger Cambodia, Lao PDR, Myanmar, and Thailand will also mean a stronger ASEAN. In this way, the new cooperation framework was expected to act as a building block to move ASEAN forward at a more even pace on the basis of self-reliance and shared prosperity. <http://www.acmecs.org/index.php?id=9>

¹² *Social Impact Monitoring and Vulnerability Assessment Report*, 2010, Lao PDR National Report. Mekong River Commission.

¹³ Pakxong Coffee Capital. <http://www.pakxong.info/>

Socially, most people that inhabit the district are Lao Lum. However, there are also many ethnic minorities in the area, including Trieng (Talieng), Ye, Trieu, Dak Kang, Katu, Ngkriang (Nye), Chatong, Brou (Ta-oi), Jrou (Laven), Kouay (Souay), Lavi, and Harak (Alak).

There are 24 villages in the district growing cabbage for sale at local markets and to traders from Thailand, Viet Nam, and, more recently, Cambodia. The growth of coffee and cabbage farming in the area appears to have triggered some migration from the more remote districts. At village meetings, a number of villagers indicated that they had moved since 2005 from other nearby districts and provinces to settle in this district to grow cabbage, a fact later confirmed by the household survey. From the meetings, it also became apparent that the levels of village development vary according to access to electricity, paved roads, and, to a certain extent, cash crop production; and the availability of irrigation in the dry season. Most households have a vegetable garden and keep livestock and poultry. More than 50% of the households in each village were said to grow coffee.

Cultural activities remain important with each village celebrating annual festivals, such as the water festival and Buddhist Lent. Temples feature prominently in village life, as the place where villagers meet to “make merit.” Contributions by Thai traders to collective activities are said to have been highly appreciated.

Overall, villagers said that their living conditions had improved over the past 5 years, although it was noted that more than 70% of the villagers have no toilet and electricity. The majority of the villagers were said to have completed primary school and many had learnt new livelihood strategies, especially commercial farming and cross-border trade. They said the income earned from trading was not high but it was important for them as it was used for essential daily expenses, such as food, education, or health care. Some use their income for improving housing, and purchasing livestock or electronic equipment.

5.1.2 Trade Agreements and the Establishment of Contract Farming in Champasak Province

The ACMECS trade agreement signed in 2003¹⁴ paved the way, in 2005, for a bilateral agreement on cross-border trade covering the export of cabbage and other cash crops from Champasak Province to Ubon Ratchathani Province in Thailand. The agreed list of products covered by the AMAPP is flexible and is updated frequently: it increased from 11 in 2005 to 69 in 2007, and dropped to 19 in 2008. The list was expanded again to 25 in 2008 (Office of Champasak Industry and Commerce Department 2009). Under the AMAPP, the total value of cabbage exported from Pakxong rose from \$1.9 million in 2005 to \$3.3 million in 2008.¹⁵

Under the AMAPP, Thai companies and middlemen do not sign agreements directly with Lao PDR farmers. Instead, agreements specifying the minimum price to be paid and the number of Thai and Lao PDR buyers allowed to participate are signed by authorities from the two provinces, with buyers (sometimes companies and sometimes individual traders) from each side present to witness the signing of the agreements. The number of Lao PDR companies that signed the AMAPP agreement rose from 4 in 2005 to 11 in 2009.¹⁶ Farmers joining AMAPP then sign agreements with these Lao PDR companies. The number of Thai buyers signing agreements with Lao PDR middlemen and the authorities of the two provinces rose from 7 in 2005 to 15 in 2008.

¹⁴ ACMECS covers economic, social and cultural programs, including contract farming.
<http://www.acmeecs.org/index.php?id=9>
<http://en.wikipedia.org/wiki/ACMECS>

¹⁵ Office of Champasak Industry and Commerce Department. 2009. *Report on Total Exports of Cabbage*.

¹⁶ Most of them are small buyers/middlemen who, individually, were part of the cross-border trade in cabbage before the AMAPP was set up. Report on contract farming of Champasak Industry and Commerce Department, Lao PDR, 2009.

Figure 1 Map of Case Study Sites



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Source: Asian Development Bank.

Under AMAPP, when cabbage is in short supply in the Thai market, Ubon Ratchathani Provincial Commerce imports cabbage from Champasak Province; and when there is a surplus, they expect Lao PDR production to be reduced. The guaranteed minimum price was B2 per kilogram (in 2009) for cabbage, but higher prices are usually paid as market demand maintains the price above this level. The agreement also controls crop quality (weight and volume) and the use of standard Form D and other forms is required.

Pakxong District was marked by the government as one of the most suitable for cash crop production. Two wholesale markets were made available in Champasak: one in Pakxong (located in Pakxong town) and one in Wangtao-Phone Thong (located near the Lao PDR–Thai border checkpoints). These two markets have been constructed through the ADB-supported Smallholder Development Project.

In Pakxong District, each village in the case study had a production group formed by local authorities a few years before the study. According to the focus group discussion participants, the local authorities helped farmers to plan the areas to be put under cultivation, the kinds of cash crops, and amount to be planted. The production group also helped with market planning and export. However, the benefits obtained from being part of a production group are not always obvious, since many farmers still do not understand what benefits they will derive from joining the group.

5.1.3 Development of Contract Farming of Cabbage at the Village Level

According to villagers, cabbage has been grown in the area since 1990. The first Thai traders initially gave the villagers seeds and fertilizers through Lao PDR middlemen, but later they simply gave them cash loans as this was more convenient. Villagers living nearby saw the profits made by the first cabbage growers and many of them decided to try cabbage. The amounts grown were not large as the farmers lacked capital to invest in big areas. After the AMAPP came into effect, the local authorities and the Lao PDR companies worked closely to encourage farmers to participate. This was not very difficult as many of the farmers were already growing cabbage for Thai buyers. They appreciated that a minimum price would now be set.

On average, villagers devote one hectare of their farmland to cabbage. About one-third of them grow three crops a year, especially villagers who are located near a river and have irrigation systems. However, most villagers can only grow cabbage twice a year.

The contract farmers in the villages transport cabbages to the wholesale market. These are checked by officers working at the Pakxong wholesale market and then brought to the Lao PDR–Thai border. Noncontract farmers can sell their cabbage from their farms directly to middlemen from the Lao PDR or Viet Nam. Some farmers sell the crop at the local market.

5.2 Maize Case Study

5.2.1 Geographic and Socioeconomic Characteristics of Xayabouly Province

The maize study area is located in the province of Xayabouly in the northwestern part of the Lao PDR, along the Mekong River which forms a 645-kilometer long border with Thailand. On the Lao PDR side, the province is bordered by Oudomxay Province in the north and Luangprabang and Vientiane provinces in the east. There are five Thai provinces to the west (Prayao, Nan, Utaradith, Phitsanulok, and Loei). The total land area of Xayabouly Province is 16,389 km².

The province is quite mountainous with few roads except for the north–south route running from the provincial capital to the border, opposite Thailand's Loei Province. Despite erratic and highly variable rainfall patterns, the province is a fertile area. Maize, rice, cotton, and peanuts are cultivated widely.

Xayabouly Province benefits from bilateral projects agreed between the Lao PDR and Thailand, notably the Sister Cities Agreement. In recent years, Xayabouly Province has emerged as a focal point for contract farming under this initiative (ACMECS Business Council, 2008). Lao PDR–Thai contract farming initiatives are found near the two central towns of Phiang and Xaybouly, and near the four southern towns of Kenethao, Boten, Paklay, and Thongmixay. The province of Xayabouly was selected as the study area because of the extent of existing cross-border contract farming and maize (feed corn) was selected as the specific crop since it is the most important contract farming crop in the area.

5.2.2 Population and Local Administration

Xayabouly Province has a total population of about 346,000. It includes 33 different ethnic groups, but the majority of the people come from three ethnic groups: Lao Lum, 75%; Lao Thueng (Kamu), 16%; and Highlander (Hmong), 8.6%. The province has 10 districts and 455 villages, consisting of 63,600 households (Ministry of Agriculture and Forestry, Kenethao District, Xayabouly Province, Lao PDR, 2009).

The four districts in the southern region grow maize on 44,154 ha, accounting for 79% of the total feed corn areas in Xayabouly Province. Of the four districts, Kenethao was selected as the study site because it is the one closest to the border with Thailand and ranks second in total area given to maize in the province (31% of the farms).

5.2.3 Kenethao District

Figure 2 shows the location of Kenethao District in the province of Xayabouly. The district has 47 villages. Of the total land area of 1,376 km², 18,357 ha are arable. In 2009, the population was 38,689, 90% of whom are farmers. Like many districts in the Lao PDR, Kenethao is largely agricultural. The average household has 5 to 6 members and cultivates, on average, 3 ha of land. Most of these farms are issued permanent land licenses, while some hold temporary ones and the rest work on rented land or have free use of other people's land.

5.2.4 Maize Production in Kenethao District

Kenethao District has become a major feed corn area owing to its proximity to the Thai border. The average yield of maize has doubled from 2 tons per ha to over 4 tons per ha in the last decade.

Around the mid-1980s the feed corn variety Suwan 1, from Thailand, was introduced into the area. This is an improved, open pollinated variety so that farmers can get better production and also use the stored seed. However, at that time, the export of the crop to Thailand was restricted. In 1998, the Charoen Pokphand Feedmill Company introduced a hybrid feed corn variety and by 2007 it was widely distributed in the area. This variety can be stored for 3 months after harvest without aflatoxin developing, making it very suitable for remote areas.

Following ACMECS in 2003, feed corn qualified for tax exemption and could be freely exported. Due to the fertile soil in the Lao PDR, average yields have doubled, even without the use of chemical fertilizers. All these factors have contributed to the rise in feed corn production in Kenethao District (Table 1), following the trend in crop production in the province of Xayabouly as a whole as shown in Figure 3.

Figure 2 Map Showing the Location of the Maize Case Study Area

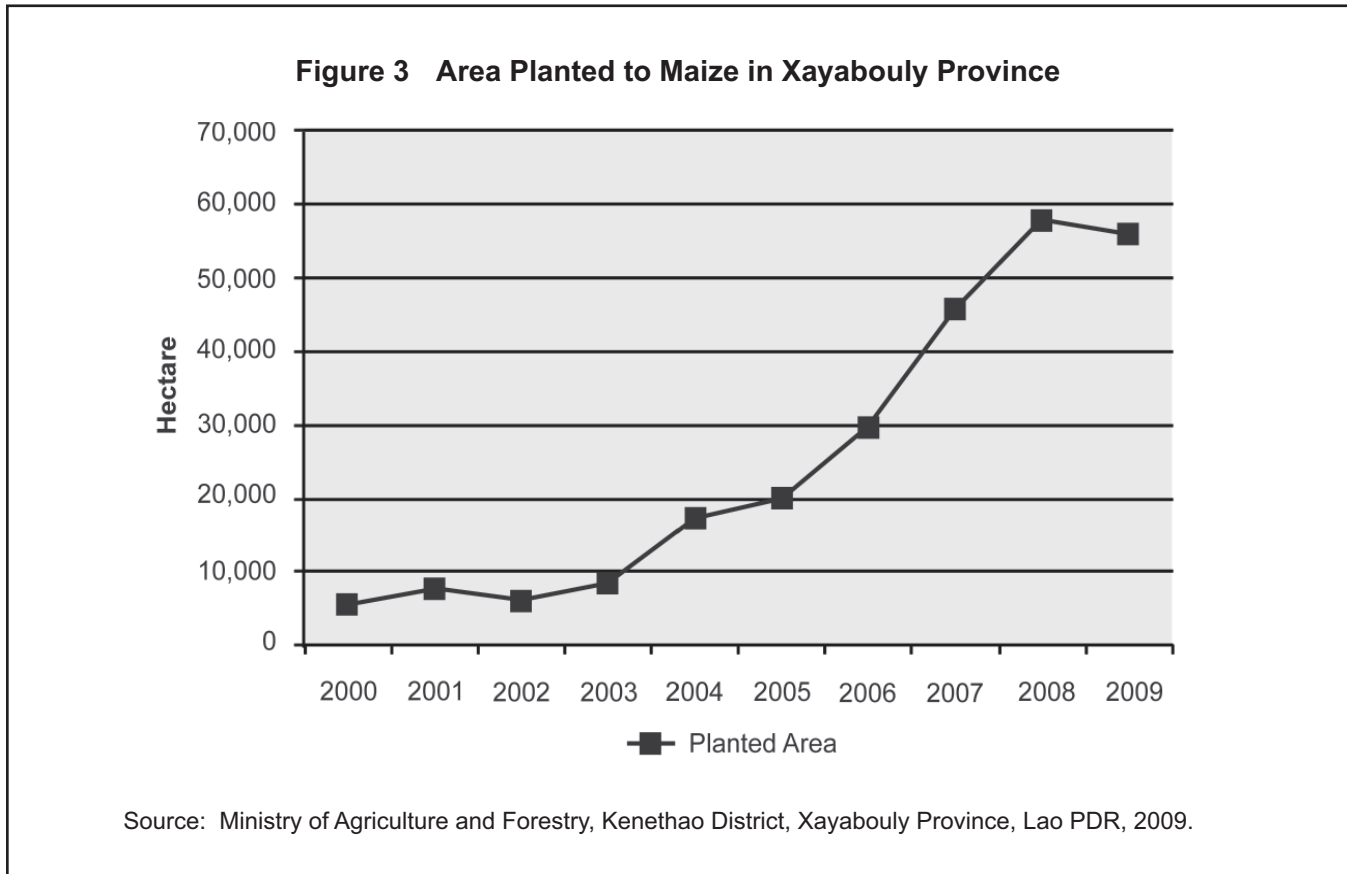


Source: Asian Development Bank.

Table 1 Land in Kenethao District Planted to Identified Crops, 2003–2005

Crop	Percentage of Land Planted to Crop		
	2003	2004	2005
Maize	50.2	59.9	77.5
Upland rice	30.7	21.0	11.5
Other cash crops	19.1	19.0	11.0

Source: Ministry of Agriculture and Forestry, Kenethao District, Xayabouly Province, Lao PDR, 2009.



The farmers grow feed corn as their main source of cash income. The usual practice is to grow rice on the lower part of the land and cash crops on the upper part. Major cash crops are maize, soybean, red bean, Job’s tears (a grain-bearing tropical plant), and jatropha; but maize dominates the land use.

The planting of feed corn in Kenethao District is totally dependent on rain. The planting season starts in May–June, at the onset of the rainy season, and harvesting is done 4 months later. A growing season of 4 months is ideal for Kenethao District as rainfall peaks in September. By this time, feed corn has been harvested to minimize spoilage. The cropping season for corn in the Lao PDR allows farmers to harvest earlier than farmers in Thailand but because of late collection by traders and poor roads, corn from the Lao PDR arrives in Thailand much later, almost at the time of Thai harvest. With so much supply in Thailand, the maize price drops. Better roads and more efficient collection system would have allowed Lao PDR farmers to enjoy a higher price in Thai market.

5.2.5 Contract Farming in Maize Production

The rise in feed corn production in Kenethao District is closely associated with the increasing popularity of contract farming in the area. As will be shown later in this study, contract farming modalities are mostly informal or partially formal; and agreements between growers and middlemen are generally verbal. Some written records are made, especially when farmers have to pay back debts from loans or in-kind services, such as ploughing. However, written contracts and fixed or guaranteed prices appear to be rare.

Farmers in Kenethao District grow maize mainly for export to Thailand. Middlemen normally go through village heads, tapping them to promote the growing of hybrid maize. Most of the middlemen offer inputs, on credit, directly to farmers; but some farmers have to go through the village heads, or the heads of contract farming groups, who act as guarantors. As with most contract farming areas, small farmers rely heavily on agribusiness contractors, usually through middlemen, for production technology, access to farm inputs and credit, and the marketing of the produce. In the event that gross sales are not sufficient to cover the amount of loans, the farmers will be in debt and interests will be charged until the amount is fully paid. In cases where farmers cannot pay back the loans, the traders assume ownership of the land and farmers become tenants to the traders.

5.3 Sugarcane Case Study

The sugarcane case study took place in Luangnamtha Province, an important gateway on the route from the PRC to Thailand, within the north–south corridor. The province has a population of 14,500, 80% of whom reside in the rural areas. As this is a border area near the PRC, road improvement and the helpful policies of Luangnamtha Province have attracted PRC investors. FDI increased dramatically from \$15,000 in 2003 to \$14.7 million in 2008. Of the total FDI, 90% came from the PRC. By the end of 2008, there were 20 PRC companies registered in the province with total investment of \$31 million. Most projects invested are in agriculture, mainly rubber, sugarcane, corn, and rice.

5.3.1 Agriculture

The major traditional crops are rice, corn, and cassava. In 2009, 17,937 ha were planted with various varieties of rice and 56,443 tons of rice were harvested; and 3,964 ha were planted with corn, producing a total yield of 13,763 tons. Most of the corn production can be found in the districts of Luangnamtha (1,845 ha), Viengphoukha (1,075 ha), and Nale (759 ha). The crop is scarcely planted in the districts of Sing and Long. A total of 1,240 ha was planted with cassava last year with a yield of 21,752 tons. Production was concentrated in Long District, which accounted for almost 60% of the planted area.

The production of cash tree-crops, such as rubber, are on the rise in the province, reaching 25,533 ha in September 2009. Other widely planted crops include sugarcane; beans; fruits, mainly watermelon and pineapple; and vegetables, mainly pumpkin and various gourds. A notable trend in valley areas is the intensified cultivation of second-season crops, such as watermelon and various vegetables. This has increased land values and the income of farming households.

5.3.2 Sugarcane Production

Sugarcane production in Luangnamtha Province began in the 1990s. Several villages grew sugarcane with the assistance of Yingmao Sugarcane Miller (YSM), which was originally named Muang Peng Sugarcane Miller. Most of the sugarcane was sold at the Lao PDR market and only 50–60 tons were sold to YSM at that time. After 2000, sugarcane production grew faster than many people had expected. In 2010, sugarcane was being grown in 96 villages, of which 78 villages were in Muang Sing District and

18 villages in Muang Long District. The total area under cultivation was 2,533 ha and the output was 111,466 tons.

In 2006, YSM officially signed an agreement with the Muang Sing district government, authorized by the Luangnamtha provincial government, to further increase the production area. Both sides agreed that it should reach 3,000 ha. The Muang Sing district government played an important role in the development of sugarcane production. At the initial promotion, the district government invited village heads to participate in an orientation seminar. During the seminar, the YSM front office staff introduced the concept of sugarcane cropping together with the concept of commitment. Village heads then called on the community members to meet with the assistants of the YSM staff. The farmers submitted their applications via village heads, or liaison persons in their community, to YSM. The YSM staff then evaluated the applications and informed the successful applicants who then became contract farmers. After selection, YSM trains the new contract farmers on how to prepare their land and how to plant sugarcane with the seed stem provided. Fertilizer is also provided as an in-kind loan, where required, with the costs to be deducted from their payments for the sugarcane. Villages ask for technical assistance via the liaison member and village head. The YSM technicians visit the field regularly.

During the harvest season, contract farmers are told when they are to harvest the sugarcane. Trucks pick up the harvested sugarcane and the drivers estimate the total weight and inform the contract farmers. This is not the final weight but a rough estimate. Drivers take the contract farmer's contract book and the sugarcane to a nearby collection station for weighing. The weights are then recorded in the books after an amount has been subtracted for impurity. Contract farmers can observe the weighing if they decide to do so. However, very few of them have done so. The truck driver then transports the sugarcane across the PRC–Lao PDR border after the YSM staff member has completed the customs reporting.

5.3.3 Contract Management in Sugarcane Production

Sugarcane is a perennial root crop that can regenerate. Growers generally plant sugarcane during March and May and harvest during November and May for three consecutive years. It is important to note that sugarcane must be processed within 24 hours after harvesting in order to maintain good quality. The limited daily milling capacity requires efficient logistics linking harvest, transport, and milling.

After 2006, YSM negotiated and signed an agreement with the Muang Sing district government. The main responsibilities of YSM include purchasing of sugarcane, providing in-kind loans, arranging transport, and giving technical advice; while the Muang Sing district government is responsible for promotion and monitoring. The study team, however, did not see the full agreement and, therefore, does not have a clear picture as to the monitoring processes or what grievance procedures will apply if there are any differences or conflicts.

The YSM applies its tested management model and offers a standard contract to each contract farmer. The contract also serves as a book to record each sugarcane transaction. The standard contract book clearly defines the rights and responsibilities of the contracting parties. However, it does not clearly state the mechanism for setting annual prices and which of the contracting parties will bear the costs of extension and transport. Implementation will provide more information.

Often both contracting parties do not sign the contract book provided by YSM, which is written only in Chinese. Rather, a farmer first applies to be a contract farmer via a village liaison person or village head. YSM then evaluates the application and provides the standard contract book with the applicant's name on it. At this point, YSM commits itself to the new contract farmer who is to be integrated into the YSM production system.

In 2006, YSM guaranteed a price of CNY160 (\$23.53) per ton, for sugarcane produced by contract farmers, when it signed an agreement with the Muang Sing district government. The actual purchase price rose to CNY170 for Grade II and CNY180 for Grade I in 2007. The amount of CNY30, for the cost of in-kind loans, extension, transport, government fees, border quarantine, and insurance, was subtracted from the payment to the contract farmers in 2010.

6. Hypothesis Testing and Conceptual Framework

6.1 Evolution of the Hypothesis

The analytical approach to answering the key research questions described earlier evolved over time. During the inception phase, field visits clearly indicated that the standard definition of contract farming, as an agreement between growers and buyers covering production support, quantity, quality, prices, and date of delivery, was not being met in all cases. Overall, it was found that cross-border trade takes place through a wide range of agreements and relationships between buyers and growers, which tend to vary according to crops and local contexts.

The team felt that the variability in relationships identified during the field visits presented an opportunity to test the extent to which varying relationship types between farmers and buyers determine the outcomes of cross-border contract farming in terms of profitability for farmers and the socioeconomic well-being of their households. On this basis, the study was refocused and a study hypothesis was formulated as follows:

The varying relationships found in contract farming in the Lao PDR determine varying beneficial effects on (sugarcane, maize, and cabbage) farmers.

6.1.1 Initial Approach

The initial approach to testing the hypothesis was to create “contract farming types” based on (i) the three categories of farmers listed earlier, (ii) the extent to which their relationships with buyers were structured, and (iii) the strength of their relationships. “Structure” and “strength of relationships”—the composite variables—were then created, with scores derived from the indicators listed above.¹⁷ On this basis, the following six contract farming types were eventually created based on possible permutations of farmer category, structure of agreement, and strength of relationships.

- i. CF1a: contract farmers with strongly structured agreements and strong relationships,
- ii. CF1b: contract farmers with strongly structured agreements and weak relationships,
- iii. CF1c: contract farmers with loosely structured agreements and strong relationships,
- iv. CF1d: contract farmers with loosely structured agreements and weak relationships,
- v. CF2: ex-contract farmers, and
- vi. CF3: noncontract farmers.

These contract farming types were then compared with the farming outcomes reported by interviewees in order to test the research hypothesis. Overall, it was found that the least satisfied farmers (in terms of their reported profits) were those with the most strongly structured agreements (CF1a and CF1b). By contrast, the most satisfied farmers were the ex-contract farmers (i.e., contract farmers who have not

¹⁷ In order to rank the degree of these two composite variables, their values were divided into quartiles with the lowest indicating loose, semi-structured, structured, and highly-structured for the structure variable; and weak, medium, strong, and very strong for the relationship variable.

had contracts in the last 2 years). The results also showed that contract farmers who were in the more structured agreements were more likely, overall, to be satisfied with contract farming and to recommend it to others than those in loosely structured agreements.

Although the approach produced interesting results, it was considered to be problematic in certain respects. First, having composite variables, with scores derived from a total number of marked questions (9 for “structure” and 11 for “relationship”), raised concerns about comparability, the mixing of diverse indicators, and weighting. Second, from a policy perspective, it was felt that it would be difficult to make recommendations on composite variables whose subcomponents could not easily be identified (e.g., recommending loosely structured agreements is not specific enough for policy purposes). In view of these reasons, for this final report, a new approach was derived.

6.1.2 Revised Approach

Under the revised approach, the key factors in the relationship between farmers and buyers that were felt to have beneficial effects for farmers were identified. The revised approach used fewer and more similar indicators and no longer included the contract farming types initially used. Three key factors—categories of farmer, types of agreement, and strength of contract farming relationship—were identified and taken on board as independent variables.

a. Categories of Farmers

Three categories of farmers were identified:

- i. contract farmers currently producing crops for export under some kind of formal or informal agreement,
- ii. ex-contract farmers, who once produced crops for export under agreement but no longer do so, and
- iii. noncontract farmers who have never produced crops for export under an agreement of any kind.¹⁸

As noted earlier, the first group—the contract farmers—was identified with the help of the government or, in the case of sugarcane, the company officials. Their status was confirmed through a single critical question: Do you sell cabbage, maize, or sugarcane under contracts or agreements with buyers? Approximately equal numbers of contract farmers and noncontract farmers were identified for interview in each study area. With regard to the second category—ex-contract farmers—insufficient numbers were identified for rigorous analysis. For this reason, this category was not included in the statistical process of hypothesis testing, but it is discussed in a qualitative manner in this report.

b. Types of Agreement

For the purposes of testing the hypothesis, two variables were selected:

- i. whether or not the farmer had been shown anything in writing, and
- ii. whether or not they had signed any contract.

¹⁸ People who use contract farming status only as a channel to sell crops with 0% tax across the border were excluded.

c. Strength of the Contract Farming Relationships

From the pre-test, it was apparent that the strength and durability of relationships, often based on trust, appeared to be an important factor. Indicators identified for inclusion in the analysis included the:

- i. number of years working together,
- ii. satisfaction with the agreement, and
- iii. degree to which disagreements have been resolved.

From these indicators, a set of composite indicators was created to serve as the independent variables to be used as scores (Table 2).

Table 2 Composition of Independent Variables

Independent Variables	Scoring
ID1. Type of agreement	
Shown something in writing	No = 0, Yes = 1
With signed agreement	No = 0, Yes = 1
ID2. Extent of flexibility	
Never or rarely negotiate prices	Never or rarely = 1, Quite often or always = 0 ^a
Do not sell produce to others	Does not sell to others = 1, Sells to others = 0 The above was recoded to flexible (score = 0) or inflexible (score = 1).
ID3. Extent of material support from buyers	
Receiving seed on credit	Weighting of 2 points
Receiving fertilizer on credit	1 point weighting
Receiving assistance with transport	1 point weighting
Receiving herbicide on credit	1 point weighting
Receiving insecticide on credit	1 point weighting
Receiving equipment on loan	1 point weighting
Receiving cash loans	1 point weighting
The above weights were used to derive an overall mean.	
ID4. Strength of relationship	
Buyers are well-trusted	Not at all or little = 0, Well enough or very well = 1
Satisfied with the way the agreement was set up	Not at all or little = 0, Well enough or very well = 1
Have been selling to current buyer for more than 2 years	1 point

ID = independent variable.

^a Scores are intentionally reversed here, as “Never or rarely negotiate prices” or “Do not sell produce to others” reflects a higher level of contractual commitment.

Source: Survey results.

The stand-alone, independent variables listed in Table 2 are then used to examine variable contract farming outcomes or benefits using the dependent variables (Table 3).

Table 3 List of Dependent Variables

D1. Access to information and advice (in the last 3 years)
% of those who accessed market information
% of those who accessed training
% of those who accessed advice on forming production groups
D2. Farm profit from contract farming crops
Mean profit on cabbage
Mean profit on maize
Mean profit on sugarcane
D3. Expenditure on assets
Mean number of new items purchased using contract farming income
% of those purchasing TV sets using contract farming income
% of those purchasing mobile phones using contract farming income
% of those purchasing rice using contract farming income
% of those making further investments using contract farming income
D4. Perceptions on profit, financial status, and benefits
% of those who say their financial situation is better since contract farming
% of those who recommend contract farming because market is guaranteed
% of those who recommend contract farming for quick and/or regular income
% of those who recommend contract farming for better income
D5. Overall view of the outcomes of contract farming
% of those who are “very pleased” with the outcomes of contract farming

D = dependent variable.

Source: Survey results.

As can be seen, the choice of dependent variables includes a mix of indicators relating to access to services, farming profits, expenditure, perceptions of profit, and overall satisfaction with contract farming. The list was generated on the basis of (i) available indicators in the questionnaire, and (ii) the frequency of responses (e.g., purchasing of trucks was not included as very few farmers made such purchases).

We had to be selective in choosing results to present. Even with only four composite independent variables and five composite dependent variables, a vast amount of data was generated through cross-tabulations or means testing of one against another. Therefore, for the purposes of this report, a selection of some of the more pertinent results of the test have been extracted for presentation. Before presenting the results, a word of caution is called for with regard to the influence of potentially “confounding variables.”¹⁹ In addition, a comparison was made of the benefits for contract farmers and noncontract farmers on a limited set of dependent variables. This was then followed by a full analysis of how outcomes vary within the critical contract farmer group. Finally, we examined qualitatively the situation of those farmers (only in the cabbage area) who had once been contract farmers but have now

¹⁹ A confounding variable is defined as interference by a third variable so as to distort the association being studied between two other variables, because of a strong relationship with both of the other variables. <http://medical-dictionary.thefreedictionary.com>

stopped. The statistics used to analyze data include descriptive statistics (percentages, means, and standard deviation) and cross-tabulations (focusing on variables that correlate).

6.2 Conceptual Framework

The conceptual framework evolved in keeping with the changes made to the hypothesis testing. As shown in Figure 4, the framework recognizes that there are diverse factors, both internal and external, driving the development of contract farming in the Lao PDR. Cognizance is taken of the government's promotion of contract farming to combat poverty by taking advantage of the country's relatively low population density and high land availability. It is also recognized that contract farming is expanding in the context of growing regional trade, including foreign investment, and in concession farms that have contract farming links to smallholders. Trading partners from neighboring countries, notably the PRC and Thailand, are expected to provide capital (inputs and/or credit), information, technology, extension services, and markets when entering into agreements with Lao PDR farmers, but the extent to which this happens varies considerably.

Figure 4 shows that the contract covers the types of agreement, extent of flexibility, extent of material support, and strength of relationship. The outcomes include access to information and advice, farming profits, expenditure, perceptions of profit, and overall view of contract farming outcomes. Beyond the hypothesis testing, the study examines the roles of officials in supporting contract farming and recommends models, policies, and mechanisms, based on the findings, in order to improve cross-border contract farming for small-scale farmers in the Lao PDR.

7. Farming Status

A total of 619 farmers answered the questionnaire, with the number of contract farmers and noncontract farmers being almost equal in the three study areas (Table 4).

Table 4 Farming Status of Respondents, by Case Study Area

Status	Cabbage Area	Maize Area	Sugarcane Area	Total
Contract farming	101 46%	100 50%	98 49%	299 48%
Noncontract farming	119 54%	100 50%	101 51%	320 52%
Total	220 100%	200 100%	199 100%	619 100%

Source: Survey results.

7.1 Respondents' Profile

Household heads in the sugarcane area have the lowest level of education, which is consistent with this area being a relatively poorly developed part of the country, compared to the center and the south (Table 5). The main occupation of household members (excluding children under 6 years old) in all areas is crop farming, using their own land (Table 6).

In 578 cases, secondary occupations were given. The single most common secondary occupation (or livelihood activity) was cattle raising, mentioned by 220 interviewees, mostly from the sugarcane-growing area. The second most important activity was daily (but erratic) labor, mentioned by 89 interviewees.

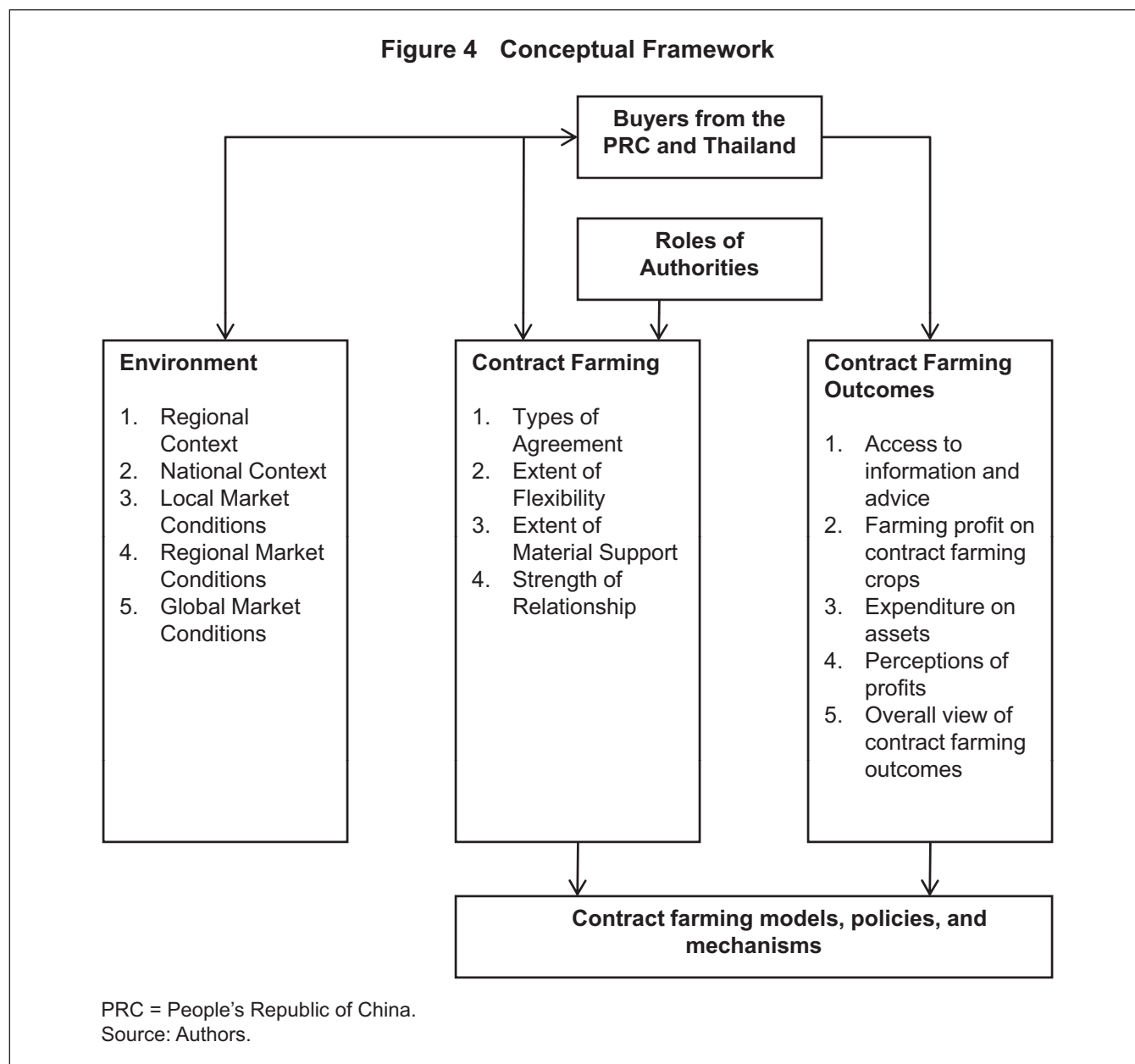


Table 5 Mean Years of Education of Household Head, by Case Study Area

Case Study Area	Mean Years of Education	Number of Cases
Cabbage area	5.4	220
Maize area	6.1	200
Sugarcane area	2.7	201
Total	4.8	621

Source: Survey results.

Table 6 Main Occupation of Household Members, by Case Study Area

Main Occupation		Cabbage Area	Maize Area	Sugarcane Area	Total
Student	No.	351	226	235	812
	%	32.4	27.5	26.4	29.0
Crop farming using own land	No.	675	559	611	1,845
	%	62.2	68.1	68.7	66.0
Others	No.	59	36	44	139
	%	5.4	4.4	4.9	5.0
Total		1,085	821	890	2,796

Source: Survey results.

7.2 Farm Profile

The respondents reported farming on a total number of 1,289 parcels of land. The main crops grown on these parcels by contract farmers and noncontract farmers are shown in Table 7.

Table 7 Parcels of Land, by Crop Grown

Crop Grown	Number of Parcels	% of Parcels	% of Household Heads Growing Crop
Sugarcane	101	8	17
Maize	265	21	43
Cabbage	218	17	36
Coffee	200	16	33
Rice	245	19	40
Others	260	20	42
Total	1,289	100	

Source: Survey results.

Table 7 shows that besides maize, cabbage, and sugarcane, crops, such as coffee, rice, and “others” (mostly vegetables and fruits), are also grown. The proportion of parcels used to grow crops is similar among the crops, with the exception of sugarcane which makes up only 8% of all parcels.

Table 8 presents the distribution of parcels by farming status and case study area. Except for sugarcane area where most sugarcane farmers are growing the crop under contract farming system, maize and cabbage farmers have almost similar distribution between contract and noncontract farming status.

Another key finding to emerge from Table 8 is that those who grow cabbage are totally dependent on cabbage and coffee as they do not grow rice. In contrast, rice is an important secondary crop for farmers in maize and sugarcane areas.

In terms of ownership (not shown in the table) and access to water, 98% of the respondents own the parcels of land that they farm and the majority depends mostly on rainfall for their water source. This is especially true for cabbage and maize farmers who usually do not own any form of irrigation system. The parcels of land are mostly rainfed: 94% in the maize area and 86% in the cabbage area. By contrast, only

58% of parcels in the sugarcane area are rainfed. The remaining 42% obtain water from a large irrigation system (8%), local irrigation system (4%), and own system for sole use (30%).

Table 8 Distribution of Parcels of Land, by Farming Status and Case Study Area

Farming Status	Crop	Sugarcane			Total
		Cabbage Area	Maize Area	Area	
Contract farmer	Sugarcane	0	4	94	98
	Maize	1	136	0	137
	Cabbage	104	0	0	104
	Coffee	85	0	0	85
	Rice	0	45	68	113
	Others	23	12	90	125
Total Parcels		213	197	252	662
Noncontract farmer	Sugarcane	0	1	2	3
	Maize	0	124	4	128
	Cabbage	114	0	0	114
	Coffee	115	0	0	115
	Rice	0	52	80	132
	Others	26	13	96	135
Total Parcels		255	190	182	627

Source: Survey results.

7.3 Reasons for Not Joining Contract Farming

Noncontract farmers gave various reasons for deciding not to enter into contract farming. (Reasons for participating in contract farming are explained in section 8.2.)

Noncontract farmers were asked, “What good things have you heard about contract farming?” About 60% of them, in the cabbage area, reported that nothing was good about contract farming. But they noted that maize farmers get a good income (43%), inputs were available to them on credit (34%), and were provided with cash loans (33%). The sugarcane farmers responded similarly: 36% reported that there was nothing good to be derived from contract farming except for a good income (37%).

Noncontract farmers were also asked, “What bad things have you heard about contract farming?” Almost 60% of respondents from the cabbage area replied that they had heard nothing bad about it. Of the maize farmer respondents, almost 40% said that the worst thing about contract farming was price fluctuation, whereas 47% of sugarcane farmers said there was nothing bad about it.

When noncontract farmers gave their reasons for not having entered into contract farming, about 29% reported that they did not have enough land. The frequency of this response was highest in the sugarcane area (54%). About 20% reported that they did not have enough labor. The frequency of this response was highest in the maize area (31%).

There were significantly different results in the three study areas in terms of the willingness of noncontract farmers to do contract farming. In the cabbage area, 75% of the farmers would be willing to do contract farming, compared with 10% in the maize area and 37% in the sugarcane area. Overall, more than 50% of noncontract farmers, in all areas, preferred written contracts—this was highest among the sugarcane

farmers (88%). The main reasons why the noncontract farmers would prefer a written contract differ significantly in the three areas. About 63% of cabbage farmers would prefer a written contract because the conditions of the contract would be made clearer. Among the maize farmers, 40% said they did not trust the buyers; hence, a written contract was preferable. About 53% of sugarcane farmers reported that they would like to get written contracts witnessed.

8. Results of Hypothesis Testing

8.1 Contract Farming Crop as a Basic Confounding Variable

The type of crop²⁰ and the institutional and commercial arrangements that have evolved around the crop clearly determine variability within the independent variables. Table 9 shows the extent of variation across the three crops covered in the study. To assist in the interpretation of the table, shading has been added: the darker the shade, the more structured or rigorous the contract farming conditions (i.e., closer to the standard international definitions described earlier). The shades are based on what quartile the results fall under, with the highest figure in the range determining the upper limit (i.e., if the highest percentage is 80%, this is divided into four, with the quartiles being 0%–20%, 21%–40%, 41%–60%, and 61%–80%).

Table 9 shows that the situation of sugarcane growers is much closer to the classic definition of contract farming than is the case for cabbage and maize growers. For sugarcane, the majority of farmers have written contracts, and nearly half have signed ones. Further, the contracts present virtually no flexibility, with the farmers indicating, almost universally, that they could not negotiate prices or sell to others. In terms of material support, credit is available on all the necessary inputs for majority of sugarcane farmers, except for equipment on loan and cash loans. The contract farming arrangements for sugarcane result in high levels of trust and satisfaction with the way the contracts were set up, and to enduring relationships with the buyer. In all, the results for sugarcane show 13 out of the 14 independent variables in the upper quartile.

The situation for maize growers is very different. Here, an insignificant number of growers (5%) have signed contracts, and only one-third recalled having the contract clearly explained to them, although most clearly understood what was required. There is a degree of flexibility as farmers are able to negotiate prices. However, they rarely sell to buyers other than the contractor as this would put them in a difficult situation with regard to repayments on credits. Indeed, seed credit is the key factor in determining contract farming arrangements in the case of maize. Provision of other inputs by buyers is much less common than in the case of sugarcane, with support for transport being the most frequently mentioned by the maize growers. Significantly, more maize farmers felt that the risks were shared than was the case of the sugarcane growers. Overall, levels of trust and satisfaction with the contract are high and just over half of the farmers have been selling to the current buyer for more than 2 years. Only 5 of the independent variables are in the upper quartile.

The case of cabbage contract farmers is fairly distinct. Here, a minority had signed contracts where there were high levels of flexibility, with most being able to negotiate prices and even to sell to buyers other than the contractor. Provision of inputs is low, with even the highest (for seed) reaching only about one-third of the farmers (39%). Although nearly half felt that risks are shared with the buyers (five times as high as for sugarcane), levels of trust and satisfaction with the contract set up were lowest among the three crops. In only 2 of the 14 cases did cabbage fall in the highest quartile.

²⁰ We consider the type of crop as a basic confounding variable. Other potentially confounding variables that were tested for their influence include: land size (no significant influence due to fairly uniform farm sizes of smallholder farmers), time (no significant influence), distance to road (too few cases of being far from the road), and ownership of own irrigation (too few cases).

Table 9 Variations in Independent Variables, by Crop

Independent Variables (Contract Farmers)	Cabbage	Maize	Sugarcane
ID1. Type of agreement			
With written agreement (%)	20	7	61
With signed agreement (%)	24	5	47
ID2. Extent of flexibility			
Never or rarely negotiate prices (%)	41	51	94
Do not sell produce to others (%)	31	97	94
ID3. Extent of material support from buyers			
Receiving seeds on credit (%)	39	78	92
Receiving fertilizer on credit (%)	26	2	93
Receiving assistance with transport (%)	11	26	73
Receiving herbicide on credit (%)	3	22	66
Receiving insecticide on credit (%)	4	2	91
Receiving equipment on loan (%)	2	15	24
Receiving cash loans (%)	10	9	5
ID4. Strength of relationship			
Trust buyers well (%)	47	81	82
Satisfied with the way the agreement was set up (%)	47	72	92
Selling to current buyer for more than 2 years (%)	54	51	71
Number of times in weakest quartile	4	4	0
Number of times in middle quartiles	8	5	1
Number of times in the strongest quartile	2	5	13

ID = independent variable.

Source: Survey results.

8.2 Overall Benefits of Participating in Contract Farming

From the results of the first field visits, it was evident that contract farming experiences are mixed, both within and across the three case study areas. In view of this, it was important to ask farmers to make their own overall assessment of how much they had, or had not, benefitted from contract farming. This was done by asking the respondent to pick one of three statements read out to them at the end of the interview.

The overall finding is that few farmers (8%) felt that they had received no “real benefit” and regretted having ever engaged in contract farming (Table 10). The majority (54%) indicated that they were “very pleased” with the outcomes, with the remaining (37%) selecting the middle statement that reflects “mixed results,” but still represents a fairly large number of farmers who would recommend contract farming to others.

Table 10 Farmers' Overall Assessment of the Benefits of Contract Farming, by Case Study Area (%)

Statements	Cabbage Area	Maize Area	Sugarcane Area	All Areas
Contract farming has not brought me real benefits. I regret joining and would not advise others to do so.	10	15	0	8
Contract farming has given me mixed results, some good, some bad. I would recommend others to be careful when joining.	51	43	17	37
I am very pleased with the outcome of contract farming/agreement and I would not hesitate to advise others to join.	39	42	83	54

Source: Survey results.

What is the basis for the overall sense of satisfaction? A key finding from the survey is that it is partly financial and partly based on other factors. Focusing on the financial dimension, the respondents were asked to give an overall assessment of their household's financial situation before and after engaging in contract farming (Table 11).

Looking at the overall results, very few farmers (4%) complained of any worsening in their financial situation because of contract farming, and relatively few (8%) said their financial situation was "the same" as when they were not engaged in contract farming. Based on these responses, there is little evidence of engagement in contract farming being detrimental to farmers. On the contrary, the vast majority of farmers (88%) felt their household financial situation was either "better" or "much better".

Table 11 Farmers' Overall Assessment of their Household Financial Situation after Engaging in Contract Farming, by Case Study Area (%)

Reported Financial Situation	Cabbage Area	Maize Area	Sugarcane Area	All Areas
Much better	10	54	38	34
Better	56	44	62	54
Same	21	2	0	8
Worse	13	0	0	4

Source: Survey results.

What evidence is there to support farmers' assertions that they are financially better off as a result of contract farming? Could their responses be a "conspiracy of politeness," with respondents simply giving answers that they thought would please the interviewers? To validate the reported improvements in the household financial situation, the results on current profits are presented. These were obtained by asking the respondents about the expenditures they have incurred out of income received from the last harvested crop on a given piece of land, and recording the total. The total expenditure was then deducted from the reported income obtained from the sale of the given crop to obtain a figure for profit. Section 8.3 discusses this in detail.

Further evidence of satisfaction being related to income can be derived from the responses to the question why contract farmers would recommend contract farming to others (Table 12).

Table 12 Reasons for Recommending Contract Farming to Others, by Case Study Area (%)

Reason	Cabbage Area	Maize area	Sugarcane Area	All Areas
1. Better income	37	51	90	60
2. Market guaranteed	32	40	16	29
3. Quick income	14	57	10	26
4. Have income for daily expenses	9	11	22	14
5. Provision of input on credit	8	28	1	12
6. Want other farmers to get profit too	5	1	25	11
7. Overcome lack of farming capital problems	10	19	0	9
8. Extra services available from contractors	2	15	4	7
9. Minimum price	13	7	0	7
10. Reduce production risk	8	8	4	7
11. Able to join production groups	4	4	3	4
12. Access to technology and/or skills development	3	1	3	3
13. Others	2	0	8	4

Source: Survey results.

Table 12 shows that the top three reasons why contract farmers will recommend contract farming to other farmers are: (i) better income (60%), which is the highest among sugarcane farmers (90%), followed by maize (51%) and cabbage (37%) farmers; (ii) guaranteed market; and (iii) quick income (26%).

Given the above, there is some basis to support the national policy of promoting contract farming as a means of alleviating poverty. The question is “What type of contract farming?” The next subsection tests the hypothesis to find out the relationship between contract farming benefits and the type of contractual relationship, to shed light on the fundamental policy question.

8.3 Comparison of Contract Farming and Noncontract Farming Benefits

A detailed assessment of benefits is a complex task as it is often difficult to trace the immediate cash benefits through the secondary developmental benefits (improved health, education, living standards, etc.) derived from expenditures using contract farming income. This is particularly true in cases where an activity is relatively new (just over one-quarter of the contract farmers in the sample had only 1 or 2 years of contract farming). For this reason, the study focused on profit as a key indicator for comparing the outcomes of contract and noncontract farmers.

A comparison of farm incomes between contract and noncontract farmers indicates that, overall, noncontract farmers are generating more profits from their farms than contract farmers. Table 13 looks at expenditure, income, and profit on all crops grown by contract and noncontract farmers on their farms. The objective is to get a sense of whether or not being a contract farmer makes a difference to farming outcomes (specifically profit). The last row in the table reports the percentage of farmers saying they had a “good” or “very good” profit.

Table 13 Mean Annual Income, Expenditure, and Profit of Household, by Case Study Area and Contract Farming Status

Indicator	Cabbage Area		Maize Area		Sugarcane Area	
	Contract Farmer	Non-contract Farmer	Contract Farmer	Non-Contract Farmer	Contract Farmer	Non-Contract Farmer
Mean income (\$)	2,932	3,242	2,260	2,197	1,327	576
Mean expenditure (\$)	1,555	1,145	745	554	715	550
Mean profit (\$)	1,378	2,097	1,516	1,642	612	26
Profit as percentage of income	47%	65%	67%	75%	46%	5%
% saying they had good or very good profit on all crops	55%	61%	60%	62%	38%	31%

Source: Survey results.

In the cabbage area, taking all of farmers' crops into consideration (i.e., including cabbage and coffee), noncontract farmers made significantly higher profits. In the maize area, the noncontract farmers were also earning higher profits, although the gap between the percentage of profit to income for contract and noncontract farmers is not quite as wide compared to those in the cabbage area. In the sugarcane area, the opposite is true (i.e., contract farmers were receiving more profits). Although the profit earned by farmers in the sugarcane area was lower than in the other study areas, the contract farmers were doing significantly better than the noncontract farmers (this may be due to investing heavily in fruit trees before any significant income was received from other crops).

This overall pattern is confirmed when the analysis is done on a per crop basis. Table 14 shows the mean profit on all crops grown. It includes coffee, which is frequently grown as a second crop in the cabbage area; rice, the most common in the sugarcane area as a second or third crop; and other crops, being mostly fruit trees in the sugarcane area.

It can be seen that noncontract growers of both cabbage and coffee did better than the contract growers, with the same being true for maize. During the focus group discussions (FGDs), noncontract farmers in the cabbage area said that they had received slightly more benefits than contract farmers because they were relatively more flexible and could sell their cabbage to buyers who offered the best price. They did not have to pay for transport to take their cabbage to the central market or the border. They also knew the market price and the buyers as well as the contract farmers since they were living in the same community. Obviously, information on the market and the demand for cabbage were spread among all the farmers regardless of their contract farming status. Among the maize farmers, the noncontract farmers obtained profits which were 10% higher than the contract farmers because their inputs (which actually arise out of the interest rates charged by middlemen) were lower and also because they received higher prices for their produce than the contract farmers. In contrast to the contract farmers, they do not usually use hybrid corn seeds which are expensive and imported from Thailand. The yield potential of this corn variety can only be achieved when used with chemical inputs, like fertilizers, herbicides, and pesticides. These inputs make maize production capital intensive. Increases in production costs make the farmers dependent on the middlemen-contractors for financial assistance.

In the sugarcane area, the number of noncontract farmers growing sugarcane was not enough to make a comparison. Therefore, it is very hard to say that contract farmers, on average, did considerably better in terms of profit than their noncontract-farming counterparts, all things being considered.

The findings from the analysis validate the hypothesis that the varying contract farming relationships (in this case contract versus noncontract farming) result in varying benefits. Overall, growing cabbage and maize under agreements with buyers (our basic definition of contract farming) does not generate better profits under contract farming. On the contrary, farmers who are operating freely in the market, and have more choices, tend to make more profits on cabbage and maize than contract farmers working under agreements.

Table 14 Mean Profit, by Case Study Area and Contract Farming Status (\$)

Crop	Cabbage Area		Maize Area		Sugarcane Area	
	Contract Farmer	Noncontract Farmer	Contract Farmer	Noncontract Farmer	Contract Farmer	Noncontract Farmer
Cabbage	698	896	0	0	0	0
Coffee	892	1,572	0	0	0	0
Maize	0	0	1,456	1,608	0	0
Sugarcane	0	0	0	0	1,033	0
Rice	0	0	0	0	528	1,052
Other ^a	537	437	0	0	(656)	(805)
Overall	2,127	2,905	1,456	1,608	905	247

() = negative or loss.

Note: Total number of cases is 722, exceeding the overall sample size as some farmers grew more than one crop. Cases where fewer than 10 farmers grew a particular crop in an area were excluded. Cases where both income and expenditure were not available were also excluded. Some farmers in the sugarcane area were reportedly reluctant to disclose their full incomes (possibly for fear of having to make repayments on credits to the contracting company). As a result, profits may be somewhat higher for sugarcane than shown here. Negative numbers for other crops for sugarcane contract and noncontract farmers mean losses.

^a Mostly fruits and/or vegetables.

Source: Survey results.

8.4 Contract Farming Outcome by Type of Contract Farming Agreement (IDI)

In this subsection, we look at how contract farming outcomes vary for the contract farmers according to the first independent variable (ID1)—type of agreement. The analysis of key variables cuts across the three case studies, as the objective is to identify outcomes influenced by variations in contract farming agreements, as opposed to location or crop. However, it should be kept in mind that the agreement type is heavily influenced by crop type, with only 7% of maize farmers having a written agreement, compared to 20% of cabbage farmers and 61% of sugarcane farmers (Table 9).

Table 15 looks at variations in access to information and advice (D1) in relation to the agreement type. Those with written and/or written and signed contracts are significantly more likely to have accessed all three subcategories of this composite variable, with the pattern being clearest on access to advice on forming production groups.

Table 15 Hypothesis Test 1: Access to Information and Advice, by Agreement Type

Dependent Variable	Agreement Type		
	Verbal	Written	Signed
D1. Access to information and advice (in the last 3 years)			
% of those who accessed market information	39	70	71
% of those who accessed training	37	54	59
% of those who accessed advice on forming production groups	27	42	54

D = dependent variable.

Source: Survey results.

In the cabbage growing area, the FGDs and interview data support this hypothesis. The FGDs indicated how relatively difficult it is to get real information on the market prices in the Thai market. Information on prices, places of sale, delivery of produce, and the amount likely to be sold is obtained by farmers from many sources. First, farmers communicate directly with the Thai buyers or the Lao PDR middlemen by phone. For example, they call the buyers to check on the price and the amount of cabbage needed before they harvest. Communicating with the buyer and the middleman by phone is considered as the most efficient way to get reliable and straightforward information about market prices. After checking the market price and the needs of the middleman or buyer, the farmers harvest accordingly. Another way to get access to market information is through the appointed marketing officer working at the wholesale market in Pakxong town. The Lao PDR middleman, who buys the cabbage from the Lao PDR farmers under contract with the Thai buyers, gets accurate information on the market price by calling the Thai buyers by phone or by observing at the Thai market in Bangkok and Ubon Ratchathani. Access to prices on the Thai market is very limited for Lao PDR farmers, officers, and middlemen. The Thai middleman, too, does not always have accurate information and so, sometimes, the Lao PDR middleman travels to Thailand and visits the Thai market to check on the real price.

Market information is not relevant in the case of sugarcane as the company works closely with farmers via the liaison persons. Farmers are informed about the sale through the representatives of the Yingmao Sugarcane Miller (YSM). In the maize area, both contract and noncontract farmers obtain market information; however, noncontract farmers obtain market-related information by themselves more than the contract farmers. This suggests that information on the market, including prices and outlets, has been satisfactorily provided by the contractors and middlemen. Both contract and noncontract farmers experience the same marketing problems, the most important of which are price uncertainty and the low prices of maize at harvest.

To explore the second dependent variable (D2)—mean profit—the two subcategories of written agreements (shown as written agreement or signed/written agreement) were merged as the number of cases is limited when analysis is carried out by crop type.

Despite the limitations of the data (low number of cases), a clear pattern emerges: farmers with verbal contracts are making better profits than those with written/signed contracts, with the greatest difference between income and profit experienced by cabbage farmers, followed by maize (Table 16). While written agreements may give a degree of clarity and certainty to farmers, they do not guarantee better profits.

Table 16 Hypothesis Test 2: Mean Profit on Contract Farming Crop, by Agreement Type

Dependent Variable	Agreement Type	
	Verbal	Written/Signed
D2. Mean profit on contract farming crops		
Mean profit on cabbage (\$)	721	344
Number of cases	49	26
Mean profit on maize (\$)	1,533	820
Number of cases	90	9
Mean profit on sugarcane (\$)	1,083	963
Number of cases	31	46

D = dependent variable.

Source: Survey results.

Not surprisingly, expenditure patterns mirror the profit pattern: the number of new items purchased is highest for those with verbal agreements and lowest for those with signed ones (Table 17). Interestingly, looking at the details of selected items in which there were high levels of purchases (using contract farming income), both TV sets and mobile phones are found in all categories, but are somewhat lower for those with signed contracts (mostly in the sugarcane area). The inverse is true for rice purchases. Interestingly, the lack of written contracts does not act as a deterrent to further investments: the majority of those reporting the use of contract farming income for this purpose had only verbal contracts.

Table 17 Hypothesis Test 3: Expenditure on Assets, by Agreement Type

Dependent Variable	Agreement Type		
	Verbal	Written	Signed
D3. Expenditure on assets			
Mean number of new items purchased using CF income	6.2	5.1	4.3
% of those purchasing TV sets using CF income	43	40	32
% of those purchasing mobile phones using CF incomes	40	40	36
% of those purchasing rice using CF incomes	61	67	75
% of those making further investments using CF incomes	31	5	10

CF = contract farming, D = dependent variable.

Source: Survey results.

The next test focuses on the perception variables. The results in the first row of Table 18 show that the type of agreement makes no difference to people's perceptions of how their financial situation has changed since engaging in contract farming. Even if profits are lower between categories, the perception that the household is better off since doing contract farming is the same throughout. By contrast, those with verbal agreements (mostly in the cabbage and maize areas) were the most likely to recommend contract farming because of guaranteed markets and quick income (from regular sales), while those with signed agreements recommend contract farming for better income (from overall sales). Finally, despite the lower profits, those with written agreements, and even more those with signed agreements, were significantly "very pleased" overall with contract farming outcomes.

Table 18 Hypothesis Test 4: Perceptions of Benefits, by Agreement Type

Dependent Variables	Agreement Type		
	Verbal	Written	Signed
D4. Perceptions of profit, financial status, and benefits			
% of those who say their financial situation is better since doing CF	87	88	87
% of those who recommend CF because market is guaranteed	35	28	9
% of those who recommend CF for quick and/or regular income	37	13	2
% of those who recommend CF for better income	54	62	82
D5. Overall view of the outcomes of CF			
% of those who are “very pleased” with the outcomes of CF	49	56	73

CF = contract farming, D = dependent variable.

Source: Survey results.

8.5 Contract Farming Outcome by Extent of Flexibility (ID2)

The second independent variable, the extent of flexibility, is based on whether or not farmers can negotiate prices with the buyers. The variations across the study areas as shown in Table 19 indicate that in the cabbage area, most farmers generally have a high degree of flexibility, as they are generally able to negotiate prices and can sell to more than one buyer. The inverse is true for sugarcane growers, where 88% described inflexible agreements. In the middle are the maize farmers, split almost 50:50 between flexible and inflexible conditions. Because of the strong pattern that exists with regard to flexibility across the case studies, the analysis of outcomes focuses on the difference within the key crops.

Table 19 ID2: Contract Farming Outcome, by Extent of Flexibility and Case Study Area

Flexibility	Cabbage Area	Maize Area	Sugarcane Area	Total
Number of cases	89	49	12	150
Flexible	86%	49%	12%	50%
Number of cases	14	51	86	151
Inflexible	14%	51%	88%	50%
Total	103	100	98	301
	100%	100%	100%	100%

ID = independent variable.

Source: Survey results.

Analysis of profit by degree of flexibility within crop categories suggests that, in all cases, growers of a particular crop in more flexible relations are more likely to make higher profits than those who are in more inflexible relationship (Table 20).

The most significant difference lies between the relatively few cabbage contract farmers (13) who report growing crops under inflexible conditions. Based on the evidence available, this condition would appear to work to their detriment. There is also a significant gap between the few sugarcane growers who report flexible conditions, although the numbers here have to be treated with caution given that there are only 11 cases. Flexibility gives the maize growers a slight overall advantage, but the difference in mean profits of those that are in flexible (\$1,500) and inflexible (\$1,415) arrangements is not very significant. However, overall, when it comes to the value of purchases made using contract farming income, farmers in

flexible situations acquired goods worth almost three times the value of purchases done by those in inflexible situations. Taken as a whole, these results indicate that it is to the farmer's advantage not to commit to relationships that allow little or no flexibility at all.

Table 20 ID2: Contract Farming Outcome on Mean Crop Profits, by Extent of Flexibility and Crop

Extent of Flexibility		Crop			Total Value of Goods Bought Fully or Partly with Contract Farming Income
		Cabbage Area	Maize Area	Sugarcane Area	
Flexible	Mean profits (\$)	796	1,500	1,382	1,470
	Number of cases	77	49	11	150
Inflexible	Mean profits (\$)	114	1,415	950	524
	Number of cases	13	51	66	151
Total	Mean profits (\$)	698	1,456	1,012	996
	Number of cases	90	100	77	301

ID = independent variable.

Source: Survey results.

8.6 Contract Farming Outcome by Number of Inputs (ID3)

The third independent variable is based on the inputs provided by buyers to farmers under varying conditions. From Table 9 it is apparent that the sugarcane growers receive considerably more inputs from buyers than either cabbage or maize growers; hence, the analysis across the study areas is problematic. However, the advantages from the provision of inputs (often at high levels of interest and rigorous payback conditions) can be seen in terms of farming outcomes. In this section, we look at certain key outcome variables and see how they vary in terms of scores based on inputs.

The first observation is that, with regard to inputs, the situation in the cabbage and maize areas (where the number of inputs is low) is clearly distinct from that of sugarcane (where the number of inputs is high). In the case of sugarcane, there is some evidence that the provision of a large number of inputs actually reduces profitability because of an increase in what the farmer would have to pay to the contracting company. This is evident from a comparison of profit categories on the last harvest in relation to the mean number of inputs provided in the contract by the company (Table 21).

Table 21 ID3: Contract Farming Outcomes on Crop Profits, by Mean Number of Inputs

Profit from Last Crop	Mean Number of Inputs
Less than \$500	5.7
\$501 to \$1,000	5.3
More than \$1,000	5.2

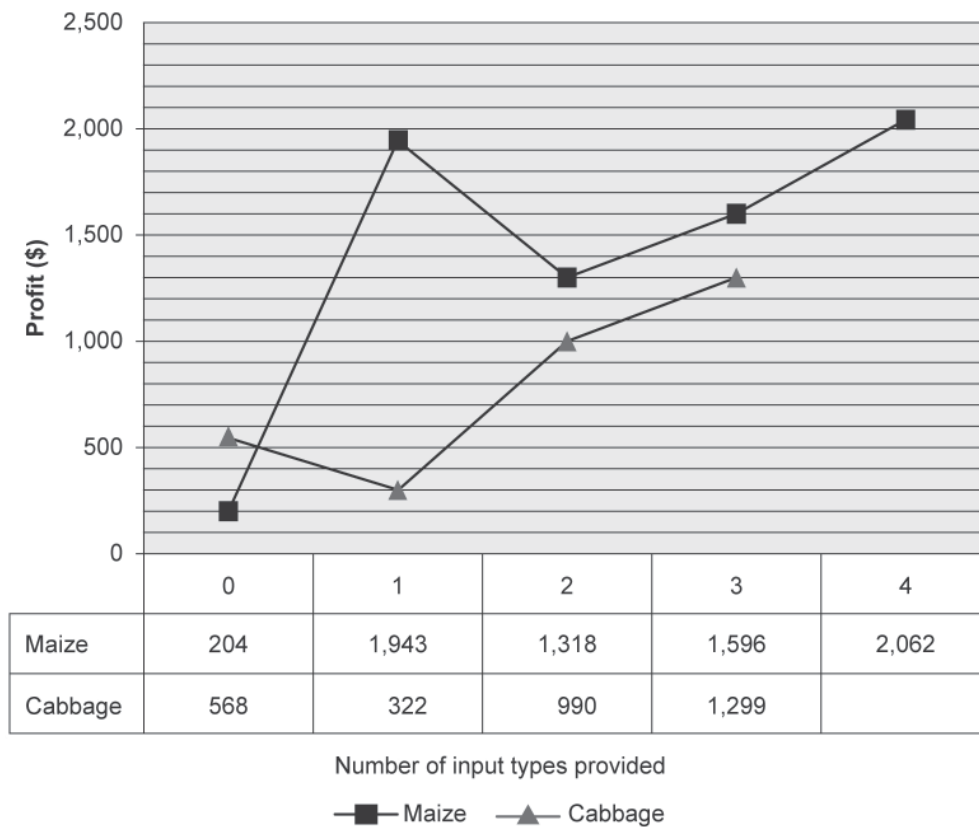
ID = independent variable.

Source: Survey results.

The inverse relationship between inputs and profit in the case of sugarcane does not appear to hold in the case of maize and cabbage. Figure 5 suggests that more support in terms of inputs is generally associated with higher profit. Although this pattern may not be perfect, the general direction is

clear: increased support from buyers in terms of inputs does seem to correlate strongly with an increase in mean profits, affirming the research hypothesis that the provision of a large number of inputs can increase profitability.

Figure 5 Relationship between Inputs Provided and Mean Profit for Maize and Cabbage



Source: Survey results.

8.7 Contract Farming Outcome by Strength of Relationship (ID4)

The last independent variable is a composite of three factors: the percentage of contract farmers who (i) really trust the buyers, (ii) are satisfied with the way the agreement was set up, and (iii) have been selling to the current buyer for more than 2 years. From these variables, a score for ID4 was established with 1 being the weakest and 3 the strongest. The pattern for ID4 across the case study areas is shown in Table 22.

Table 22 Strength of Relationship, by Case Study Area

Strength of Relationship Score ^a	Cabbage Area	Maize Area	Sugarcane Area	All Areas
1	48 47%	22 22%	3 3%	73 25%
2	27 26%	38 38%	31 34%	96 33%
3	27 26%	40 40%	57 63%	124 42%
Total	102 100%	100 100%	91 100%	293 100%

^a 1 is the weakest relationship and 3 is the strongest.

Source: Survey results.

Access to information and advice in the last 3 years (D1). Strong relationships have advantages for contract farmers, particularly with regard to market advice, as seen in Table 23. However, advice on production groups declines in time, as would be expected once farmers have gained experience.

Table 23 ID4: Contract Farming Outcomes on Access to Information and Advice, by Strength of Relationship Score (%)

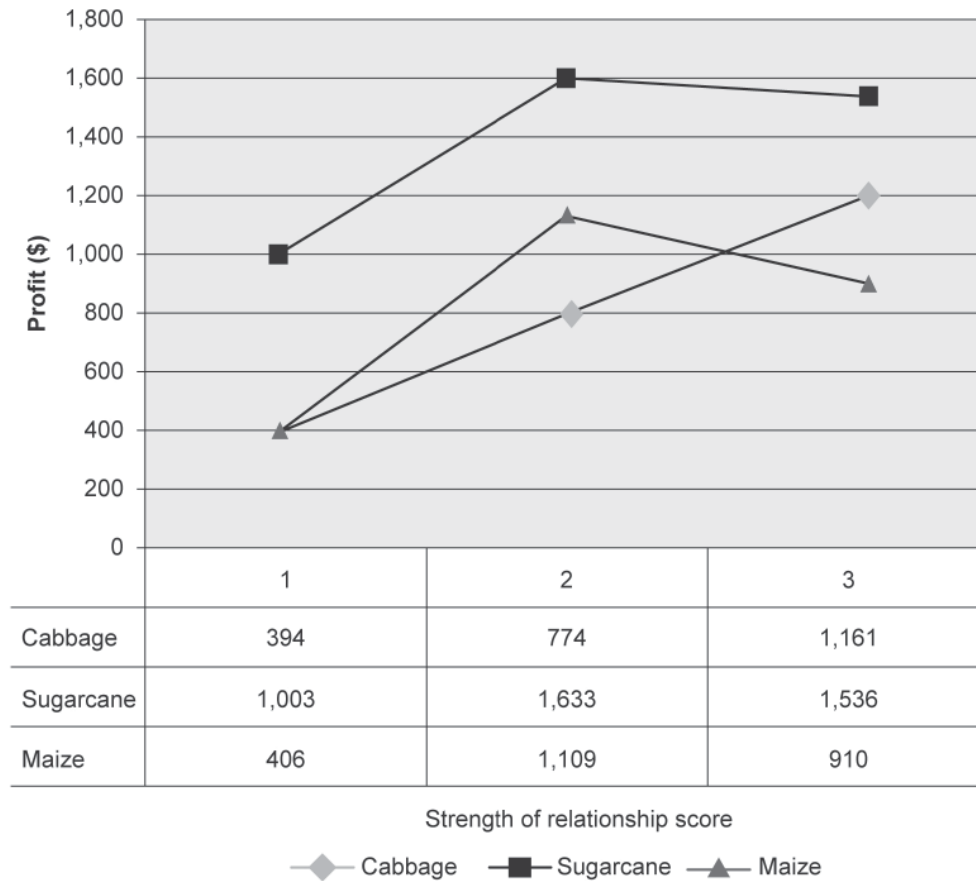
Dependent Variable	Score ^a			Overall
Access to information and advice in the last 3 years	1	2	3	
Received market advice	43	52	56	51
Received training	47	52	39	45
Received advice on production groups	37	41	30	35

ID = independent variable.

^a 1 is the weakest access and 3 is the strongest access.

Source: Survey results.

Mean profit on contract farming crops (D2). The question is “How does the strength of the relationship influence profit?” In all areas, there is a very significant difference between the lowest score (a weak relationship) and the next. In the case of cabbage, this trajectory is maintained; however, in sugarcane and maize, it is not, indicating that once a certain level of relationship is achieved, it is adequate to maintain profits. The key finding is that in the area where verbal agreements predominate and where flexibility of contracts is highest (i.e., in the cabbage area), the strength of relationships has an important influence on profits (Figure 6).

Figure 6 Mean Profit, by Strength of Relationship Score

Source: Survey results.

Overall satisfaction with the outcome of contract farming (D5). Overall, strong relationships (score of 3) appear to be critical in terms of generating satisfaction with contract farming, as shown in Table 24.

Table 24 Perception on Satisfaction with Contract Farming, by Case Study Area

Variable	Score ^a			Total
	1	2	3	
% of respondents who feel they have “really benefited” from contract farming and would recommend it to others	38	52	66	55

^a Refers to strength of relationship score, where 1 is the weakest relationship and 3 is the strongest.
Source: Survey results.

8.8 Contract Farmers versus Ex-Contract Farmers

So far the subcategory “ex-contract farmers” has not been discussed in the findings. This subcategory of farmers applies only to those who have not had a contract farming agreement in the last 2 years. Unfortunately, only 35 farmers of this type were identified in the course of the study, all of them were

located in the cabbage area. Because of the limited number of cases, it has not been possible to treat them as a separate stratum for the analysis. However, based on findings reported in the mid-term report (where an analysis was done specifically on this category), the following observations can be made:

- Compared to all other categories, ex-contract farmers were the most likely to report “good” or “very good” profits on their farms (67% versus 50%).
- By contrast, they were the least likely to be satisfied with the outcome of contract farming (31% versus 54%).

The results are limited but informative, suggesting that, at least for some farmers, contract farming may be a useful stepping stone toward profitable and free market farming, where farmers are not in any structured contractual relationship with buyers. Such farmers would use contract farming to obtain higher levels of non-financial benefits (such as, market information and training) and then they move on to operate competitively once they have obtained what is needed.

8.9 Discussion of Hypothesis Testing Results

At the start of the analysis, the study validated the hypothesis that the varying relationships found in contract farming in the Lao PDR determine varying beneficial effects on (sugarcane, maize, and cabbage) farmers. The results are emphatic: varying relationships result in varying beneficial effects. From the foregoing analysis, the following key variations may be highlighted:

- i. All things being equal, noncontract cabbage and maize farmers tend to earn somewhat higher profits than their contract-farming counterparts (\$896 versus \$698 for cabbage, \$1,608 versus \$1,456 for maize).
- ii. Having a written and/or signed contract does not provide any financial advantage for contract farmers, although it is associated with higher levels of access to market information, training, and advice on production groups, as well as to higher levels of overall satisfaction with contract farming outcomes.
- iii. In all cases, growers of a particular crop who are engaged in more flexible relationships are more likely to make higher profit than those who are in less flexible relationships.
- iv. In areas with more flexible relationships (mostly cabbage and maize), increased support from buyers in terms of inputs correlates strongly with an increase in mean profits.
- v. In areas with more inflexible relationships (mostly sugarcane), an increasing number of inputs is associated with decreasing profits.
- vi. In areas with the greatest flexibility (maize), the stronger the relationships with the buyers, the greater the profits.

From the point of view of obtaining information and advice (D1), it is apparent that there are distinct advantages to having a written and/or signed contract. Nearly twice as many farmers in this category received market information, training, and advice on forming production groups than their counterparts with only verbal contracts. These benefits may explain why those with signed contracts had a more positive overall view of contract farming (D5), despite the fact that they frequently made less profit than their counterparts who had only verbal agreements. In other words, although having a written and/or signed contract may be a financial disadvantage, it appears to carry other benefits (notably access to information) that result in higher levels of overall satisfaction.

Overall, the hypothesis has been proven, even with only a limited selection of variables.

9. Other Important Findings

9.1 Services Obtained

Table 25 shows the services obtained by farmers in the last 3 years (2007–2009), comparing contract farmers and noncontract farmers. Overall, contract farmers had more access than noncontract farmers to market information, technical advice, training, credit, and advice on forming production groups.

Table 25 Farmers who Obtained Services during the Last 3 Years, by Contract Farming Status and Case Study Area (%)

Services Obtained	Status	Cabbage	Maize	Sugarcane	All Areas
		Area	Area	Area	
Market Information	Contract farmer	50	37	67	51
	Noncontract farmer	32	49	46	42
Technical Advice	Contract farmer	31	43	28	34
	Noncontract farmer	30	46	18	31
Training	Contract farmer	37	45	52	45
	Noncontract farmer	37	47	30	38
Credit for inputs	Contract farmer	27	27	6	20
	Noncontract farmer	16	9	5	10
Credit for equipment	Contract farmer	16	12	1	10
	Noncontract farmer	9	3	0	4
Advice on forming production groups	Contract farmer	50	13	42	35
	Noncontract farmer	41	8	23	25
Advice on cross-border trade	Contract farmer	42	2	17	21
	Noncontract farmer	17	2	11	10
Advice on customs and taxes	Contract farmer	35	1	12	16
	Noncontract farmer	17	2	8	9
No one comes to give information	Contract farmer	12	9	7	9
	Noncontract farmer	27	9	12	16
Other	Contract farmer	1	0	1	1
	Noncontract farmer	0	3	1	1

Note: Number of cases is 618.

Source: Survey results.

9.2 Production Groups and Impact on Contract Farming

The government is promoting the formation of production groups. The advantage of this, from the government's perspective, is that production groups provide an efficient way to reach farmers with extension, information, and other services.

Production groups are relatively common among contract farmers in the sample; however, just over one-third (39%) of contract farmers are members of production groups (Table 26).

Table 26 Contract Farmers who are Members of Production Groups, by Case Study Area (%)

Study Area	%
Cabbage	44
Maize	23
Sugarcane	49
All Areas	39

Note: Number of cases is 298.

Source: Survey results.

Being a member of a production group did not necessarily result in higher overall levels of satisfaction among contract farmers. The percentage of farmers who stated that they were very satisfied was virtually the same among members and non-members of production groups (53% for members and 55% for non-members).

Perceptions of the benefits received from being a member of a production group are varied: nearly half (42%) of the contract farming cabbage growers did not feel they were getting any benefits from their membership, compared to 9% of contract maize growers and 2% of contract sugarcane growers (Table 27). One reason for this relatively high level of dissatisfaction among contract cabbage farmers may be the mismatch between their stated needs and the benefits they actually receive from production-group membership. For example, based on the FGDs, the cabbage growers need access to bank credit (43%), but being a member of a production group does not currently help in this respect.

For the sugarcane growers, being part of production group is most important from the point of view of transport (51%), not a surprising result considering the nature of the crop. This was followed by access to inputs (29%) (Table 27). For maize growers, the key benefit is training (52%), followed by bargaining power (43%).

Table 27 Reported Benefits from Production Group Membership, by Case Study Area (%)

Benefits Reported	Cabbage Area	Maize Area	Sugarcane Area	All Areas
None	42	9	2	19
Training	20	52	0	18
Bargaining power	4	43	0	10
Bulk buying of inputs	0	17	2	4
Bulk sales of crops	4	9	9	7
Shared transport	4	13	51	25
Access to inputs	16	9	29	20
Convenient contact with the government	4	13	2	5
Can negotiate the sale price	2	17	17	11
Exchange of knowledge/information	2	13	21	12
Access to bank credit	2	0	0	1
Other	0	0	13	5

Note: Number of cases is 115.

Source: Survey results.

9.3 Disagreements and their Resolution

Extent of disagreement. Disagreements between farmers and buyers are not uncommon. Nearly one in four contract farmers (27%) reported that they had had disagreements with their buyers (Table 28). As reported by 81 contract farmers, a total of 335 disagreements occurred over the past 5 years, of which 259 (77%) were blamed on the buyers. There are very significant differences between the case study areas (Table 28).

Table 28 Contract Farmers who had Disagreements with their Buyers, by Case Study Area (%)

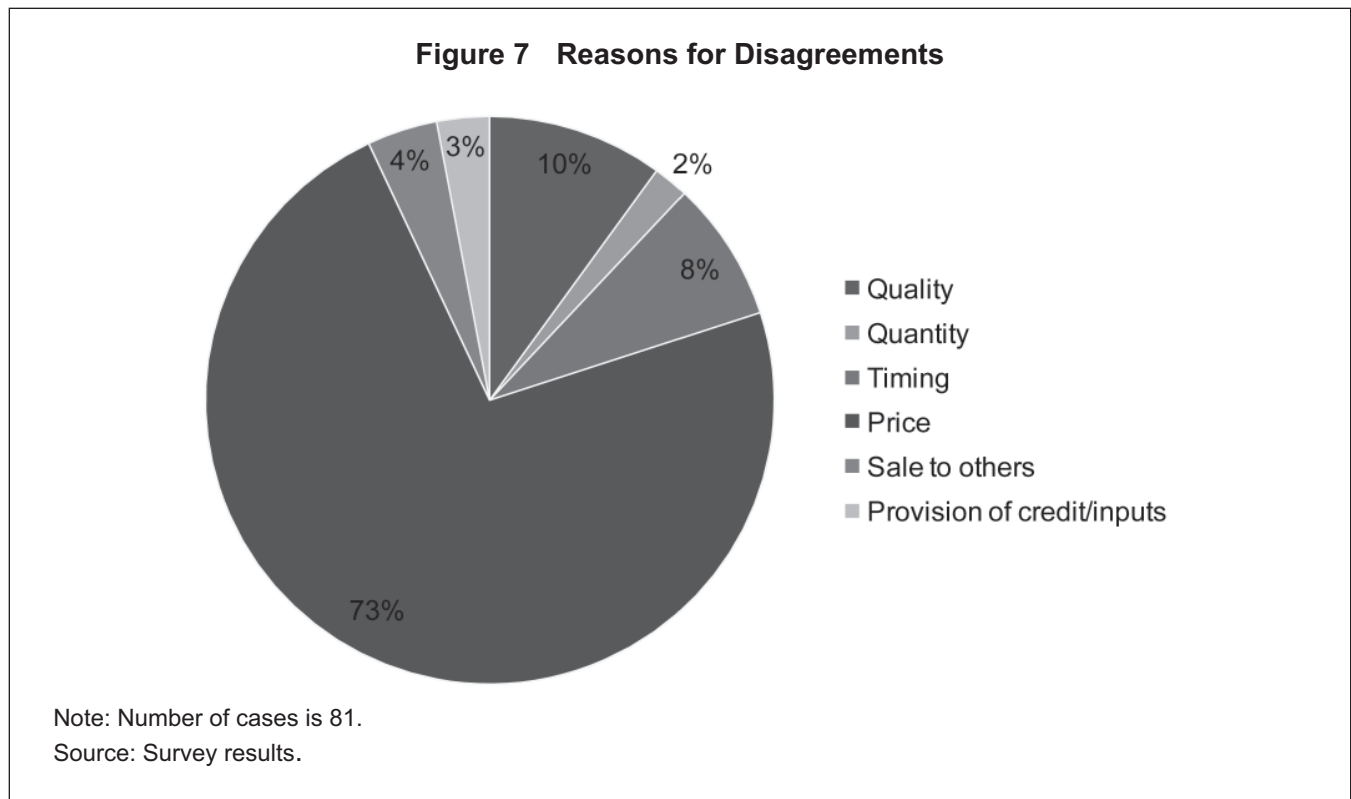
Response	Cabbage Area	Maize Area	Sugarcane Area	All Areas
With disagreement	57	16	6	27
No disagreement	43	82	94	73

Source: Survey results.

In the most structured contract farming situation—the sugarcane case study—conflicts were rare (only 6%). Clearly, where agreements have been worked out in detail, and where there are written contracts, fixed prices, and farmers have few options to sell to other buyers, the scope for conflict is much reduced.

There are more than twice as many contract farmers who experienced conflicts in the maize area (16%) than in the sugarcane area (6%); but this is lower than in the cabbage area where more than half of the farmers (57%) had experienced a disagreement with their buyers. The difference in the cases of disagreements between maize and cabbage growers could be accounted for by the nature of the crop: where the crop is harvested only once, as in maize, there is less scope for conflict than where a crop is harvested successively in the season, as in cabbage. Another explanation is that, as in the case of maize, agreements which are closely tied to the provision of seeds on credit leave less room for farmers to negotiate; and, hence, prevent any disagreement with buyers.

Nature of disagreements. By far the most common reason for disagreement is price (73%) (Figure 7). This dwarfs all other reasons.



Disagreement resolution. In the majority of cases where there had been a disagreement (63%), the disagreement was not resolved. It is most likely that these lingering, unresolved cases contributed generally to a negative perception of contract farming. Companies, production groups, village leaders, government officers, and, in the case of cabbage, the appointed marketing officer, all played a minor role (fewer than 5 cases out of the 81 reported) in resolving disagreements. However, none of the disagreements ever came to court.

9.4 Views from Government Officials and Companies

Government officials and representatives of companies were interviewed in all three study areas. Their views of contract farming varied from area to area. In the case of sugarcane, local Lao PDR officials suggested that the PRC continue its substitution program that exempts sugarcane from tariff and import value-added tax. They also hoped that YSM could find a way to increase the benefits to contract farmers. YSM has agreed to closely monitor the payments to sugarcane contract farmers; and it strongly suggested that both the PRC and the Lao PDR governments stabilize their current policies so that sugarcane trade can enjoy the tariffs and tax exemptions, which are part of the PRC substitution program and border trade with the Lao PDR. On the other hand, local officials in the Lao PDR suggested promoting sugarcane in selected villages and resolving differences locally. All emphasized that it is also necessary to upgrade roads and to standardize procedures and fees where there is cross-border trade.

In the case of cabbage, the Lao PDR government officials suggested that cabbage farmers should at all times strive to produce crops of high quality and that they should follow the agreement to sell to the agreed buyers only. The officers felt the need for a central government policy that will support the provincial government with a budget to promote cross-border contract farming. Lao PDR officials in Champasak Province suggested that national and provincial authorities in the province should expand

their trade facilities by developing a central wholesale market for farmers, and by improving the capacity of the farmers to produce products for export.

A Lao PDR officer at the provincial level reported that the signed contracts between Lao PDR and Thai middlemen were not consistent from year to year as they depended on Thai policy. This inconsistency causes problems when placing orders for cabbage. The Lao PDR middlemen said that they were hesitant to buy cabbage from Lao PDR farmers for Thai traders as they had insufficient capital for making the purchase. They want the Thai buyers to provide a deposit.

The Lao PDR officer further proposed that the contract should be a document signed by the farmer and the Lao PDR company and not, as is currently the case, signed by the company and the farmer's group. If each farmer signs directly, the officer will be able to monitor the farmer and the implementation of the contract more closely. Both Lao PDR and Thai officers agree that cross-border contract farming strengthens the international Sister Cities Program which is being actively supported by the authorities and the private sector.

The owner of the Lao PDR company, Pakxong Development Export–Import State Enterprise, who signed the cross-border contract with Champasak Province, reported that cross-border contract farming provides small farmers with a secure income. It guarantees sales, at daily market price. Farmers benefit as the market price may be higher than the agreed minimum price. Farmers can either sell the cabbage to the company in the town or they can take their produce to the Thai buyers at the border themselves. If farmers request inputs or other services, such as fertilizer and seed, the company provides them. The company deducts the cost of the inputs from the sale, with the farmers receiving the balance. However, the main problem facing the company is the fluctuation in prices. Thai traders do not pay a fixed amount for cabbage. This causes a problem for the Lao PDR farmers as they do not know how much cabbage to produce. In the summer, Thai farmers grow cabbage at the same time as the Lao PDR farmers. The Thai buyers buy the surplus Lao PDR cabbage below the agreed minimum price. The Thai buyers, on the other hand, reported that “quantity depended on quality.” On many occasions, the cabbage did not meet the agreed quality of 1 kilogram per head of cabbage. The Thai buyers would like to sign contracts directly with Lao PDR farmers and provide them with training on how to produce good quality product.

In the case of maize, the district government officials, in a FGD, shared that farmers in Kenethao District grew maize mainly for export to Thailand via the Thai border. Middlemen normally go through village heads to encourage them to promote the growing of hybrid maize. Most of the middlemen offered inputs on credit directly to farmers, but some farmers have to go through the village heads or heads of the contract farming group as guarantors. As in most contract farming areas, small farmers rely heavily on agribusiness contractors, usually through middlemen, for production technology, access to farm inputs and credit, and marketing of the produce.

10. Conclusions and Policy Recommendations

10.1 Overall Findings and Recommendations

Cross-border contract farming is largely beneficial for small-scale farmers and should be promoted. The findings of this research study indicate clearly that the type of contract farming practiced by Lao PDR smallholder farmers growing cabbage, maize, and sugarcane in diverse conditions is largely beneficial and an effective mechanism for tackling rural poverty. Contract farmers have relatively high levels of overall satisfaction with contract farming, with more than half (54%) being “very pleased” with the outcomes. The vast majority (88%) said that their financial situation was “better” or “much better” than before contract farming.²¹ It is also worth noting that other non-monetary dimensions, including access to markets and inputs, trust in buyers, and long-lasting relationships, have emerged as equally important.

The overall results on contract farming benefits, financial and non-financial, clearly imply that the Government of the Lao PDR and its development partners should continue to support contract farming, especially for smallholders, across the country, especially in the remote areas.

Contract farming provides a range of services not readily available in rural areas. In a sense, contract farming acts as a proxy (or substitute) by providing farmers with services, such as market information, training, technical advice, credit, and advice on production groups. It is not easy for other farmers to access such services. In this sense, contract farming assists in providing services that should normally be provided to farmers by government agricultural extension services. The availability of these services helps to explain the relatively high levels of satisfaction among the contract farmers, despite relatively low financial gains in some cases.

Government, at both central and provincial levels, should encourage buyers to provide farmers with a range of services that may not be readily available in the areas where contract farming is being promoted.

For certain crops, notably those that are not dependent on a centralized processing plant, contract farming can be a transition to free-market cash cropping. Results from the small sample of ex-contract farmers suggest that contract farming may be a useful stepping stone toward profitable, free market farming where farmers are not in any structured contractual relationship with buyers. These farmers use contract farming to obtain higher levels of services available, and then move on to operate competitively once they have learned what they need to know.

Government can promote contract farming as a vehicle for developing farmer know-how and once this is acquired to encourage farmers to enter into competitive cross-border cash cropping.

10.2 Recommendations Relating to the Key Research Question

The study sought to address the gap on the contract farming knowledge of small-scale farmers by asking: “What are the best contract farming models, policies, and supportive mechanisms that might offer poor, small-scale farmers in the Lao PDR the most equitable sharing of risks and benefits?” Each of these components is discussed below.

²¹ This supports findings from similar surveys that carried out more detailed financial cost benefit analysis than this research (Setboonsarng et al 2008).

10.2.1 Models

A wide variety of contract farming models exist in the Lao PDR.²² Within the scope of this study, it was not possible to explore all of them. As noted earlier, the study looked at three cases that all fall within the one-model-type that the Government of the Lao PDR promotes, which is the “2+3” model. Under this model, farmers provide (i) land, and (ii) labor; whereas the companies (or buyers) provide (i) capital in the form of inputs or credit, (ii) technology and extension, and (iii) the market.

In all cases in the study, the farmers provided what was expected. Specifically, they primarily provided family labor, but they also hired seasonal labor when required. They also provided the land required for the contract farming crop, but still retained portions of their land for other crops.

However, on the buyers’ side, conditions vary more than was originally anticipated. In some cases, the buyers only provided the market; in other cases, they provided the market and some capital (usually inputs, not cash), but no technology or extension; and in others, they provided all three. This being the case, it would be more accurate to describe the model as the “2+1” or “2 or 3” model.

As we have seen, within the 2+3 model, specific conditions vary considerably. For example, some contracts are written, some are verbal; some work on fixed prices, others on negotiations. The important point is that diversity in arrangements is not problematic; on the contrary, there is evidence that farmers can benefit from diverse arrangements.

Farming conditions and market opportunities in the Lao PDR are diverse, depending considerably on land availability, crop, and market conditions. A model that works well for one crop may not work for another crop. The study findings suggest that relatively successful models can emerge on their own from the dynamic relationships that develop between willing buyers and willing sellers in cross-border trade. This dynamic evolution of diverse contract farming arrangements needs to be encouraged.

*Government should not attempt to impose fixed models in a dynamic situation, but rather work on policies that will both (i) **protect** farmers from any exploitation, and (ii) **promote** the growth of contract farming in a manner that will be beneficial to emerging small-scale farmers. The recommendations below are made on the key policies and measures needed to achieve this.*

10.2.2 Policies

Overall policy suggestions have been made at the start of this subsection. Two recommendations relating to the cross-border dimensions of contract farming are as follows:

Maintain negotiations. The growth of contract farming has been achieved largely through improvements in cross-border trade in the last 5 years or so. This has not come about easily. Months of negotiations were required between officials on both sides of the borders and considerable effort was required from Lao PDR extension officers to promote crops for contract farming on the Lao PDR side.

Given the critical role of the multilateral and bilateral trade agreements (discussed in more detail in the case studies) in the growth of contract farming, it is essential that these should be regularly reviewed and updated, based on discussions and negotiations between the parties, including farmers and companies.

²² Zola (2008) discusses five models: (i) wholesale market model operating with domestic investment, (ii) plantations established on land concessions granted by the government, (iii) concession share-croppers’ model, (iv) producers’ association model, and (v) independent farmers’ group model.

Stability of border-trade policies. Successful cross-border trade depends first and foremost on stability. Farmers take risks when investing in a given crop. Sudden changes in trade agreements, customs, taxes, or other formal or informal payments can have a very detrimental impact.

*As far as possible, the Government of the Lao PDR should endeavor to create a stable trade environment by maintaining policies and conditions for extended periods. Where changes are imminent, it is crucial that both buyers and farmers should be informed well in advance, **at meetings with officers**, to allow time to make the necessary adjustments.*

Diversification. Contract farming is one of the many livelihood strategies that farmers can use to supplement their income in order to improve their living conditions. It should be one option among others.

The provincial government should encourage farmers to retain their diverse livelihood activities. Organic farming and the cultivation of crops, such as coffee, vegetables, and fruits, can complement the growing of contract farming crops. The local authorities should work with farmers in order to avoid loss from monocropping of contract farming crops.

10.2.3 Supportive Mechanisms

A wide range of recommendations emerged when contract farmers were asked, "What can government do to make growing crops under agreements more beneficial for the poor?" These were comprehensive that they were used as a framework of measures recommended to improve contract farming for small-scale farmers, incorporating the views of government officials and companies where appropriate.

The highly diverse responses reflected the diversity of local conditions and needs. This, in itself, is an important finding; it underlines the need for local government officials to be able to assess farmers' needs and draw up plans for support that are specific to their areas. Based on the overall results, below are a number of clear findings that can help guide the national policy on contract farming:

Improve roads. At the top of the list, well above others, is the recommendation that roads should be improved. The government and its development partners already appreciate the importance of roads. This farmers' recommendation underlines the critical role that transport plays in facilitating the development of agriculture in the Lao PDR.

As far as possible, investment in feeder roads should be prioritized in areas where contract farming is being developed. Supporting the expansion and maintenance of the rural road network in contact farming areas may be the single most effective intervention donors can make.

Provide training. Farmers value knowledge. They realize that contract farming requires the acquisition of new farming and marketing skills; and the demand for training is clearly high, with nearly one-third of contract farmers recommending this as a contribution that should come from the government. Unfortunately, it is not within the scope of the study to examine in detail the particular types of training that farmers need. However, the training needs are likely to be diverse, given the differences across crops and clients.

*The starting point is to train **provincial government officials** to enable them to (i) conduct basic training needs assessments, and (ii) prepare training packages that address the gaps. These will then provide the basis for lobbying either from government or its partners for the necessary budget to roll-out tailored (or area-specific) training packages.*

Provide credit, inputs, and irrigation. Just over one in four contract farmers recommended that government could make contract farming more beneficial for the poor by assisting in providing credit and/or inputs. The FGDs also indicated that irrigation provision will ensure production. The expansion of contract farming in certain areas, notably cabbage and maize, is constrained by the farmers' difficulty in obtaining credit to invest in vital irrigation equipment and other productive assets. The buyers are providing inputs in some cases, but this type of support is far from universal. Irrigation is poorly developed in contract farming areas. While it is not necessarily the role of government to provide credit or other inputs, they should promote the mechanisms that will enable farmers to gain access to these inputs.

Government, both at central and provincial levels, should play a facilitating role by encouraging other agents (buyers, microfinancing projects, banks, irrigation schemes, etc.) to make credit available to farmers at the provincial level, particularly for farmers with a proven track record and who are not receiving support from buyers.

Similarly, government can play a facilitating role at the provincial level by encouraging a better supply of inputs to farmers by buyers, or through production group organizations.

Allocate more land for small-scale contract farming. At the provincial level, difficult decisions have to be made regarding land allocation. Although the land issue has not been explored in any detail in this study, this farmers' recommendation is supported by the work of Zola (2008) who noted that valuable land is often given away on very generous terms (e.g., 30-year leases) for concession farming to foreign companies.

The results of this study suggest that it might be more beneficial to allocate such land to small-scale farmers engaged in the types of contract farming discussed in this report (2+1 or 2 or 3).

Strengthen production groups. Production groups can be developed to serve the specific needs of members in relation to their crops and farming circumstances. However, these needs must first be well understood if the support provided is to be relevant.

Agricultural extension officers, working with production groups, need basic training in conducting needs assessment and in the facilitation of relevant support so that the necessary resources reach the groups on a regular basis.

Develop mechanisms for conflict resolution. In order to minimize conflicts between farmers and buyers over prices and related matters, the two parties should be encouraged to reach prior agreement on how crops will be priced. This does not imply that the price should be fixed, but rather the mechanism for establishing a fair price should be agreed, in the context of a fluctuating market.

Local mechanisms, such as conflict-resolution training, information on international and national rules, and regulations governing trade, need to be developed whereby disputes can be reported and amicably resolved. Farmers need to know their rights and where to go when disputes arise. Those handling disputes need to have a good understanding of the relevant regulations and agreements and need some training in conflict resolution skills.

Inform buyers of the range of farmers' needs. Farmers were asked a similar question about what they felt buyers could do to make contract farming more beneficial for farmers. Not surprisingly, the most common (and logical) suggestion is that buyers should offer better prices (53%), or at least guarantee a certain price (19%), as is often the case in contract farming agreements internationally. The next three most common recommendations are associated with credit, inputs, and transport, all of which exist, but

are very limited. Interestingly, following these (in fifth place) is a recommendation that buyers should provide more flexible contracts or agreements, reinforcing the findings of the hypothesis testing which showed that such flexibility results in better profits for farmers.

Without placing an undue debt burden on farmers, buyers should be encouraged by the Government of the Lao PDR to provide inputs to contract farmers.

10.3 Recommendations Relating to the Hypothesis Testing

Encourage the use of simple written contracts. Contract farmers with written contracts may make somewhat less profit than those with verbal agreements, but the individual case studies show that there is strong evidence of support from farmers that written contracts are clearer, can be witnessed, and provide more security.

Buyers and farmers should be encouraged to use simple contracts that record the fundamentals of their agreements in common language understood by both parties.

Encourage a degree of flexibility. Contract farmers in relationships that have some flexibility do better financially than those who are in less flexible relationships.

Within the limitations imposed by crop types and the need for buyers to recover credits, agreements that have a degree of flexibility should be encouraged.

10.4 Recommendations from the Case Studies

10.4.1 Cabbage Case

Empower the women. The case study on cabbage contract farming shows that women play an important role in negotiating prices and managing contract farming incomes, yet their roles are hardly acknowledged formally.

Women should be targeted specifically for training on the management of finances and should be supported to play a more active and overt role in contract farming operations.

Explain the nature of cross-border trading. In the near future, the ASEAN Free Trade Area (AFTA) will play a major role in cross-border trade. Farmers, companies, and provincial officers do not fully understand the impact of AFTA on cross-border contract farming.

Local authorities should educate farmers and companies by training them or giving them information on cross-border trading and how farmers can benefit from AFTA.

10.4.2 Maize Case

Strengthen farmer–buyer relationships. The case study on maize also indicates that Lao PDR farmers appreciate direct contact with Thai buyers, especially when the latter provide support to their villages for road improvements and cultural events.

Direct relations should be encouraged, under specific guidelines.

Promote post-harvest quality. Post-harvest quality must be maintained in order to receive a good price. The government could help the farmers in building post-harvest or storage facilities.

Provincial government should develop post-harvest storage facilities to preserve the quality of maize, and, hence, to maintain good selling price for a longer period of time. A mechanical drier can be installed or a simple sun drying pavement can be constructed where the farmers can dry their harvest to prevent spoilage.

10.4.3 Sugarcane Case

Standardize cross-border procedures. The case study on sugarcane shows that stabilization of the policy on cross-border trade between the PRC and the Lao PDR will help the latter to improve contract farming procedures and practices.

The current policies on the border trade of the Lao PDR and the substitution program of the PRC have dramatically reduced the costs of cross-border trading. Both governments must now standardize fees and procedures and broaden the open border policy found on the coast and in the river basin. The PRC and Lao PDR governments could also discuss joint border check mechanisms to avoid double checks.

Clarify conflict resolution mechanisms. The government must strengthen and clarify conflict resolution mechanisms between contracting parties. A resolution mechanism will not only help sugarcane contract farming but also other businesses.

Sugarcane transactions, between producers and buyers, should fall under Lao PDR jurisdiction. Enforcement of the resolution mechanism is a necessary part of conflict resolution.

Consolidate the ongoing improvement of feeder roads in rural areas. Bad feeder roads become barriers to rural development and poverty reduction. The main road in Luangnamtha is accessible, thanks to the continuous efforts of the government.

Development aid can play an important role in the enhancement of feeder roads in rural areas.

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Research Team

Lead Institution:

Mekong Sub-region Social Research Center
Ubon Ratchathani University, Thailand

Kanokwan Manorum
David Hall
Pinwadee Srisupun
Sakunpan Photijak

Collaborating Institutions:

Greater Mekong Sub-region Study Center
Yunnan University, Yunnan Province
People's Republic of China

Xing Lu
Zhuo Zhang
Xiaoxiao Ji
Chunmeng Zou

Champasak Agriculture and Forestry College
Lao People's Democratic Republic

Singkhon Siharath

Mekong Institute, Khon Kaen University, Thailand

Suchat Katima
Maria Theresa S. Medialdia

Research Supervisor:

Florian Albuero
School of Economics, University of the Philippines

Main Report

Main authors:

Kanokwan Manorom
David Hall

Mekong Sub-region Social Research Center
Ubon Ratchathani University, Thailand

Contributors:

Xing Lu

Greater Mekong Sub-region Study Center
Yunnan University, Yunnan Province
People's Republic of China

Maria Theresa S. Medialdia

Mekong Institute, Khon Kaen University, Thailand

Cabbage Case Study

Kanokwan Manorom
David Hall
Pinwadee Srisupun
Sakunpan Photijak

Mekong Sub-region Social Research Center
Ubon Ratchathani University, Thailand

Singkhon Siharath

Champasak Agriculture and Forestry College
Lao People's Democratic Republic

Sugarcane Case Study

Xing Lu
Zhuo Zhang
Xiaoxiao Ji
Chunmeng Zou

Greater Mekong Sub-region Study Center
Yunnan University, Yunnan Province
People's Republic of China

Maize Case Study

Suchat Katima
Maria Theresa S. Medialdia

Mekong Institute, Khon Kaen University, Thailand

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Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel +63 2 632 4444
Fax +63 2 636 2444
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