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AGRICULTURAL TRADE BETWEEN CHINA AND THE GREATER MEKONG SUBREGION COUNTRIES
An Overview

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1.1 INTRODUCTION

The Greater Mekong Subregion (GMS) encompasses five Southeast Asian countries—Cambodia, Laos, Myanmar, Thailand and Vietnam—and China. These six countries had a total population of 1.6 billion in 2018.

More than two decades of market-oriented reforms and rapid economic growth have transformed the GMS into one of the most dynamic subregions in Asia. With the exception of Thailand, GMS countries have grown at an average annual rate of more than 7 per cent in the last twenty-five years, placing them among the ranks of high-growth economies. GDP per capita growth has likewise been impressive, averaging roughly 8 per cent in China and Myanmar, and over 5 per cent in Cambodia, Laos and Vietnam since 1995. Across all six countries of the GMS, the structure of the economy has shifted from agriculture to industry and services (Table 1.1). The GMS

TABLE 1.1
Growth and Structural Transformation in GMS Countries

Country	*Average GDP Growth (Annual %)*	*Average GDP per Capita Growth (Annual %)*	*Sector Value Added (% of GDP) Agriculture / Industry / Services*	
	1995–2018	*1995–2018*	*1995*	*2018*
China	9.1	8.4	19.6 / 46.8 / 33.7	7.2 / 40.7 / 52.2
Cambodia	7.7	5.7	47.7 / 14.3 / 34.2	22.0 / 32.3 / 39.5
Laos	7.0	5.2	42.2 / 18.8 / 40.9	15.7 / 31.5 / 41.6
Myanmar	9.4	8.4	42.2 / 57.2 / 9.7*	24.6 / 32.3 / 43.2
Thailand	3.5	2.8	9.1 / 37.5 / 53.4	8.1 / 35.0 / 56.9
Vietnam	6.7	5.5	27.2 / 28.8 / 44.1	14.7 / 34.2 / 41.1

Note: *Myanmar data are for 2000.
Source: World Bank World Development Indicators.

countries are at different stages of transitioning to commercial agriculture. Whereas Thailand, Vietnam and China already have large commercial agricultural sectors, Cambodia and Laos are well behind, with much lower levels of commercial agricultural activity.

While agriculture's share of the economy is declining across the subregion, the sector remains a critical one for growth and poverty reduction. Agriculture still accounted for nearly a quarter of GDP in Cambodia and Myanmar in 2018. With the exception of China, the majority of the population in GMS countries continues to live in rural areas. Agriculture also remains a major source of employment in GMS countries, accounting for between 27 per cent and 68 per cent of total employment in 2018. More importantly, poverty remains a largely rural phenomenon in GMS countries (Table 1.2).

Empirical studies underscore the importance of agriculture in reducing poverty. The World Bank (2007) estimates that growth driven by agriculture is between two to four times more effective at reducing poverty than other sectors. Using time-series and cross-section regression analysis covering twenty-five countries, Cervantes-Godoy and Dewbre (2010) confirm this finding by showing that although economic growth is an important contributor to poverty reduction, the sector mix of growth matters greatly, with growth in agricultural incomes being particularly important. Moreover, agriculture's linkages to manufacturing and services—through the processing, packaging and transport of agricultural products—create

TABLE 1.2
Agriculture's Importance in GMS Countries

Country	*Rural Population (% of Total Population)*	*Employment in Agriculture (% of Total Employment)*	*Rural Poverty Headcount Ratio at National Poverty Lines (% of Rural Population)*	*Poverty Headcount Ratio at National Poverty Lines (% of Total Population)*
China	40.8	26.6	7.2 (2014)	7.2 (2014)
Cambodia	76.6	30.1	20.8 (2012)	17.7 (2012)
Laos	65.0	67.7	28.6 (2012)	23.4 (2012)
Myanmar	69.4	49.7	N.A.	N.A.
Thailand	50.1	30.4	13.9 (2013)	10.9 (2013)
Vietnam	64.1	39.4	18.6 (2014)	13.5 (2014)

Note: N.A. = not available.
Source: World Bank World Development Indicators.

multiplier effects that contribute further to economic growth. For these reasons, agriculture remains a strategic priority for all GMS countries. The sector continues to figure prominently not only in national development plans but also in regional cooperation schemes in which GMS countries are participants.

1.1.1 Opportunities for Developing Agriculture in GMS Countries

Vast opportunities exist for GMS countries to grow and develop their agricultural sector. They are endowed with natural resources and climate conditions that are favourable for growing high-value agricultural products. Their strategic location also allows them to link up with major markets across Asia as well as Europe, through different transport corridors that already exist or are being built.

At the same time, several trends in the global market for agricultural products bode well for GMS countries. First, the demand for food is expected to grow by 15 per cent over the coming decade, with demand predominantly coming from regions with high population growth, specifically, Sub-Saharan Africa, South Asia, and the Middle East and North Africa (OECD and FAO 2019).

Second, increasing income and urbanization are changing dietary and consumption habits, with more and more consumers demanding access

to foodstuffs that are safe, convenient and high quality. Niche markets for organic and ethically sourced food are likewise growing. These changes in consumption habits provide GMS countries with increasing opportunities to export higher value-added agricultural products instead of just raw materials, a shift that is critical for raising farmers' incomes.

Third, trade in agricultural products has been growing at a significant pace. The value of global food and agricultural raw materials exports has more than tripled since the beginning of the century, from about US$545 billion in 2000 to roughly US$1.8 trillion in 2018. Food and agricultural raw materials exports share of global merchandise exports increased from 5 per cent to 9 per cent during the same period. More promisingly, although exports of food and agricultural raw materials continue to be dominated by developed countries, the export share of developing countries has increased steadily over time, from 31.5 per cent in 2000 to almost 40 per cent in 2018. China is the biggest trading partner of Cambodia, Myanmar, Thailand and Vietnam, and the second biggest of Laos; and, except for Thailand, agriculture dominates this trade. In 2017, trade between China and the other five Mekong countries surpassed US$200 billion and has continued to grow.

Fourth, foreign direct investment (FDI) in the agriculture sector has been rising on the back of increasing food prices, changing and expanding consumer markets, and increasing demand for biofuels. In the case of food, beverages and tobacco, the FAO estimates that FDI to developing economies doubled between 2003–8 and 2009–14, from an annual average of US$7.4 billion to US$15.1 billion (Fiedler and Iafrate 2016). China is not only the biggest source of FDI in the GMS region, a significant portion goes towards promoting agricultural development and trade in the CLMV.

The growth of trade and FDI in agriculture has been underpinned by unilateral reforms as well as liberalization commitments taken under different bilateral, regional and multilateral agreements. Improvements in infrastructure and logistics have also played a huge role. The GMS countries themselves remain staunchly committed to efforts to liberalize trade and investments. All six GMS countries are members of the World Trade Organization (WTO) and are parties to multiple free trade agreements. Their inclusion in the ASEAN Economic Community (AEC) and their participation in subregional programmes such as the GMS Programme and the Lancang-Mekong Cooperation initiative also provide different avenues

for increasing trade and investments and improving trade facilitation that can ultimately benefit the agricultural sector.

1.1.2 Objectives and Coverage of This Research Study

Whether or not GMS countries are able to take advantage of the growing opportunities mentioned above will of course depend on several complex domestic and external factors. This particular study examines two of these factors: the extent to which GMS countries are able to meaningfully participate in agricultural value chains (AVCs), and the extent to which they are able to meet non-tariff measures (NTMs) applied to agricultural exports.

The main objective of this research is to increase the efficiency of agricultural trade in a manner that contributes to improvements in rural development, poverty reduction, and inclusive and sustainable growth. The study limits the analysis to the export of selected agricultural products from the five GMS (hereafter referred to as CLMV-T) countries to China.

This volume consists of six country papers covering each of the GMS countries. The papers were prepared collaboratively by experts from leading research institutions within the subregion.

Several significant events have taken place either just before or after the completion of the papers included in this volume that could affect some of the analyses or conclusions. Two global events that are worthy of note are the US-China trade war and the outbreak of the coronavirus (COVID-19) pandemic. Both are having a significant influence on the region and beyond. There have also been national challenges, such as the political turmoil in Myanmar, and to a lesser extent in Thailand, and these events continue to evolve and affect the countries concerned as well as the region.

As of mid-2021, it is still unclear when these events will resolve themselves, and therefore what the full impacts of these shocks are likely to be. What is clear is that the impacts of the COVID-19 pandemic and curtailment measures being taken by countries covered in this volume and elsewhere are having major, wide-ranging economic and social effects. The impacts from the pandemic appear to be outweighing those of the US-China trade war, although it is becoming increasingly difficult to disentangle the effects of each. Needless to say, the coup in Myanmar is having devastating effects on the economy and society. The general

conclusions and recommendations drawn from the analyses contained within this volume need to be interpreted cautiously, bearing in mind the still uncertain impact that the evolving COVID-19 pandemic and trade war, in particular, could have across countries.

The next chapter examines the structural changes taking place in China and their possible implications for agricultural trade within the subregion. The paper identifies a number of factors that bode well for agricultural exports. It also examines trends in NTMs imposed by China on agricultural imports.

Chapters 3–7 of this volume contain country case studies that examine a range of traditional and non-traditional exports from CLMV-T to China. The studies adopt broadly consistent frameworks for analysing the value chains of each of these products and identify the NTMs faced by these products both domestically and in the Chinese market.

The remaining sections of this overview summarize the main findings and recommendations from these country studies.

1.2 AGRICULTURAL TRADE WITHIN THE GMS: THE IMPORTANCE OF CHINA

Chapter 2 of this volume, prepared by the Institute of World Economics and Politics, Chinese Academy of Social Sciences, highlights the important role played by China in agricultural trade within the subregion. The chapter identifies several factors that are likely to increase trade between the GMS countries and China.

First, China's population is expected to peak and reach between 1.45 billion to 1.5 billion by around 2030. Population growth, along with changes in the population structure, increasing income, growing urbanization, and shifts in dietary structure, are expected to increase demand for fruits, vegetables, meat products, special grains and feed grain.

Second, China's domestic supply of agricultural products has been unable to keep up with growing demand. Given the current availability of arable land and present constraints on the domestic production system, China has already reached the limit of its food production capacity. As such, China's total import volume of agricultural products will continue to grow in the next ten years.

Third, in the context of revealed comparative advantage (RCA), China's comparative advantage lies in machinery and electronics, textile and other labour-intensive industries (where the RCA index is greater than

1). Agricultural products or agricultural-related products such as food, vegetables and livestock are at a comparative disadvantage. Moreover, the RCA index of some of China's agricultural products has been declining. China is, therefore, better off importing agricultural products from the CLMV-T that have a comparative advantage in these products.

Fourth, China's average tariff on agricultural products has dropped to 14.6 per cent, or about a quarter of the global average tariff on agricultural products. More recent policy pronouncements by Premier Li Keqiang suggest that the average rate of China's tariffs would drop to 7.5 per cent. Customs clearance will also be expedited further.

Fifth, the CLMV-T has become China's main destination for FDI in agriculture. Private enterprises from China have been particularly active investors. Between 2004 and 2015, private enterprises established by China accounted for around two-thirds of total enterprises in GMS countries (Panthamit and Chaiboonsri 2020). Moreover, non-agricultural enterprises such as CITIC Construction and the CGCOC Group have gradually become an important driver of agricultural FDI. Moving forward, it bears highlighting that China's 13th Five-Year Plan contains a commitment to "actively carry out overseas agricultural cooperative development, establish scaled overseas production, processing, storage and transportation bases, and cultivate internationally competitive agricultural multinational corporations." (Central Committee of the Communist Party of China 2019).

Finally, China has been actively pushing several initiatives that should further improve trade and investment linkages with the CLMV-T, through various multilayer cooperation frameworks such as the Lancang-Mekong River Dialogue and Cooperation, the China-ASEAN cooperation framework, the Belt and Road Initiative, China's bilateral economic partnerships, and its participation in the Regional Comprehensive Economic Partnership agreement. China's overseas development assistance has also been an important source of financing for the CLMV-T. All of these initiatives signal continued commitment on the part of China to strengthen economic relations with its neighbours.

1.3 AGRICULTURAL VALUE CHAINS IN GMS COUNTRIES: KEY ISSUES AND CHALLENGES

Understanding how AVCs work in GMS countries is important given the fundamental changes that are taking place in how agricultural products

are produced, processed and distributed. Traditionally, the markets for agricultural products have been mainly governed by spot market transactions that involved a large number of small producers and retailers. This dependence on impersonal commodity markets has decreased over time. Instead, modern agricultural production, processing and distribution are now starting to resemble value chains in manufacturing, characterized by vertical integration and consolidation of the supply base (Henderson and Isaac 2017; Montalbano, Nenci and Salvatici 2015).

This trend towards greater integration is particularly strong in the case of food products. As an OECD and WTO (2013, p. 14) report notes:

> The same processes driving the emergence of global value chains in other sectors are also at work in the agrifood sector, notably technological change, transport and logistics innovation and the penetration of global agribusiness companies into local markets, through both direct contract relationships and investments. At the heart of this structural change is the "value chain". Changes in food retailing are leading to greater involvement of the private sector in agriculture and a focus on developing and improving agriculture value chains in terms of quality, productivity, efficiency, and depth. As consumer demands for safety, quality and convenience is growing, so is the pace of change in food markets leading to a more active and assertive role for the private sector.

Gaining access to these value chains can provide developing countries with stable markets for their agricultural products. However, specific firm-level constraints exacerbated by broader policy and institutional challenges can affect the ability of domestic actors to plug into these value chains. Moreover, with lead firms now having a bigger say in how agricultural products are produced, processed and distributed, concerns regarding governance and power relationships within AVCs have inevitably come to the fore.

Within this context, the country papers included in this study examine the main processes and key actors involved in value chains for selected commodities, with the intent of identifying the key constraints and relationships between actors along the entire value chain. The analyses seek to identify options not only for improving performance within the value chain but also for maximizing benefits for all the actors involved. The country papers also examine, with the available secondary data, various NTMs that agricultural exporters in the CLMV-T face when exporting the examined agricultural products to China.

The products covered in the country studies were selected based on their importance in the country's overall export basket, as well as the growing demand for those products in the Chinese market.

The Thai country study prepared by the Thailand Development Research Institute (TDRI) focuses on two important local products—cassava and durian. Thailand has been the world's largest exporter of cassava products and durian, and China is Thailand's major export destination for both products. Cassava chips—which are processed products but only to a limited degree—still make up the bulk of exports to China, but in recent years there has been a noticeable shift in demand towards native and modified starches, which are much higher value-added products. Durian exports to China have been steadily climbing. Differences in harvest seasons in the main planted areas in East and South Thailand allow Thailand to supply durian to the Chinese market throughout the whole year. Up until recently, Thailand was the only country allowed to export fresh durian to China, but it now faces competition from Malaysia.

The Cambodia study produced by the Cambodia Development Resource Institute (CDRI) also examines the value chain for cassava, and the value chain for sugar cane. Cassava is Cambodia's second-largest agricultural crop after rice, and Cambodia is the world's second-largest exporter of fresh tubers and dried chips after Thailand. Sugar production is mainly for supplying domestic demand; only 20 per cent of domestically produced sugar cane is exported. Final and semi-final sugar cane products are exported to three major destinations. In 2016, Vietnam accounted for the bulk with 75 per cent, followed by the EU with 20 per cent and China with 5 per cent.

The Laos country study, prepared by the Economic Research Institute for Industry and Trade (ERIIT), examines rice and Cavendish banana, two of six potential commercial crops that have received a significant amount of foreign investments from China in recent years. In 2018, China granted Laos an import quota for rice of 20,000 tonnes. Laos has a surplus of rice and can export to foreign markets, but it is still a relatively small player in the region. Cavendish banana production is solely for export. In terms of volume and value, Cavendish banana crops have become Laos' second-largest cash-crop export to China after rubber.

The country study for Myanmar, prepared by the Centre for Economic and Social Development (CESD), examines the maize value chain, focusing on production from southern Shan State. Myanmar's trade with China expanded rapidly during the period when economic sanctions by the US

and EU were in place, from around the 1990s. China is now Myanmar's biggest trading partner, and agricultural commodities make up most of this trade. The study finds that producers need to improve quality standards and compliance with international regulations in order to increase their exports to China and other trading partners in order to diversify sources of demand.

The final country study on Vietnam, produced by the Centre for Analysis and Forecasting of the Vietnam Academy of Social Sciences (CAF-VASS), examines the value chains for coffee and dragon fruit. Vietnam is the second-biggest coffee producer in the world after Brazil, and it is currently the leading exporter of dragon fruit. Although the bulk of Vietnam's coffee exports goes to the EU and the US, China's demand for Vietnamese coffee has been rising. The export value of coffee from Vietnam to China increased dramatically from US$90 million in 2014 to more than US$330 million in 2016. Vietnam was the largest supplier of coffee to the Chinese market in 2016. China is the largest market for Vietnam's dragon fruit both in terms of volume and value.

The country studies in this volume confirm previous research which finds that the degree of vertical coordination or integration in AVCs depends on the country context, the agricultural product, and the standards that must be met to be able to export the product (Montalbano, Nenci and Salvatici 2015; Swinnen 2015; Bamber et al. 2014). Both global experience and the analysis presented here suggest that vertical coordination or integration is more likely to take place in countries where land is available and labour is abundant, but capacities at other nodes of the chain are either weak or non-existent. It is also more likely to take place in the case of agricultural products such as vegetables or fruits, which are highly perishable and must meet more stringent quantity and quality standards related to processing, packaging or transporting fresh produce.

Some examples from the country case studies are worth citing. The Thailand and Cambodia studies show that in the case of cassava, the value chain continues to be dominated by smallholders, and the relationship between actors in the entire value chain still relies mainly on market-based governance structures. In Cambodia, there is a small portion of producers who use written contracts with operators or exporters, but this is because they are focused on the niche market for organic products. By contrast, the production of Cavendish banana in Laos has a high degree of vertical coordination. This is because the majority of Cavendish

banana plantations are owned by Chinese investors in the form of a land concession from the government or contract farming under a 1+4 model, whereby the local farmers lease their property to investors, and the investors provide the rest.

The country case studies in this volume illustrate how AVCs focused on exports can help improve income opportunities for domestic producers and enterprises that are able to participate in these AVCs. The country case study for Laos, for instance, shows that a farmer growing rice for export to China can earn about US$231 per hectare, more than double the amount that could be earned from producing for the local market, which is about US$109 per hectare. Some rice collectors have also benefited from representing rice mills in collecting rice from scattered farmers in different villages. The same study notes that farmers welcome the income from land lease agreements for the production of Cavendish banana. Meanwhile, the Cambodia case study on sugar cane reports that AVCs have helped create jobs for locals who are hired on the production and processing sides.

The studies also show some of the benefits that can come from increasing vertical coordination and integration, Contract farming arrangements—such as the 2+3 and 1+4 arrangements for rice and Cavendish banana in Laos—allow countries to access foreign markets even if they do not yet have the full range of capabilities required to produce, store, transport and distribute a particular product. Such arrangements can also reduce information asymmetries that often arise between producers and buyers with regard to product characteristics. This gives producers a better chance of meeting strict standards that must be met in order to access final markets overseas (Montalbano, Nenci and Salvatici 2015; Swinnen 2015; Bamber et al. 2014).

At the same time, contract farming arrangements can provide domestic producers with access to technical and input support and other forms of farm assistance that allows them to overcome constraints on capital and know-how. Lead firms may also build linkages with logistics providers to transport raw material to processing plants and final markets. This is evident in the case of rice in Laos and sugar cane in Cambodia.

Finally, vertical coordination and integration can provide access to new types of production and help all actors in the chain upgrade towards higher value-added activities. The analysis of the sugar cane industry in Cambodia notes that, with lead firms playing a central role from

raw material production to transport and trade, the industry has been significantly upgraded.

However, the country case studies also yield a number of findings which suggest that the broader impact of these AVCs on inclusive and sustainable growth may be limited. For instance:

(i) Lack of requisite skills may be preventing local workers from participating in higher-value activities. Although AVCs have helped create employment to a certain extent, in some cases local workers are still mainly engaged in manual or low-skilled tasks that are highly informal. This is evident in the case of sugar cane in Cambodia and Cavendish banana in Laos. In sugar cane, farmers are mainly hired as fieldworkers. However, labour is now being replaced by machines on the production side, and farm service providers are at risk of disappearing from the value chain. Moving forward, only a small number of labourers will be required for activities in farming and processing. In Cavendish banana, Chinese investors mostly employ Chinese nationals as plantation managers. Laotians are given small administrative jobs, with a monthly average income that is just slightly higher than the minimum wage (US$175 vs. US$128, respectively). Temporary labourers hired during harvesting season receive a daily wage of about US$7 to US$8. The prevalence of informality in these kinds of arrangements has important implications for poverty and vulnerability.

(ii) Lack of absorptive capacity may be preventing local enterprises from participating in or progressing to more sophisticated forms of participation within a modern AVC. At the same time, the shift from traditional to modern AVCs could result in some domestic participants disappearing from value chains. Domestic enterprises can also be crowded out by foreign enterprises if they lack sufficient competitiveness. These issues are evident in the case of durian from Thailand and rice from Laos. The structure for fresh durian's value chain has dramatically changed. In the traditional value chain, durian orchardists sold their harvest to local merchants and various partners. But the need to sort durian for export has shifted power from the intermediaries to the packing houses, which now collect and prepare durian primarily to meet standards for export to China. Increasingly, these packing houses are owned and run by Chinese entrepreneurs

who are attracted by the profitability of durian. Meanwhile, in the case of rice from Laos, only two Chinese-owned rice millers are qualified to export rice to China. Local rice mills in Laos are typically small and do not have the time or resources to obtain the necessary certification needed to export rice to China.

(iii) Power and economic gains may be unequally distributed. Several country case studies in this volume identify the lack of bargaining power as a major problem for smallholders and small and medium enterprises in the agricultural sector. This problem could be exacerbated within vertically integrated AVCs where investors or lead firms dominate decision making. The gains from participation in vertically integrated AVCs may also be distributed unequally, with lead firms in vertically integrated AVCs tending to have higher mark-ups and profits.

(iv) Negative spillovers may arise, compromising long-term sustainability. In Laos, the government has announced a moratorium for granting any new land concessions for banana plantations given concerns about the long-term negative impacts of heavy chemical usage on the environment and the health of farmers.

(v) Increasing dependence on a single market. With the exception of Vietnamese coffee, which is exported to more markets and depends mainly on world market prices, the prices of other agricultural products covered in this study are heavily influenced by what happens in the Chinese market. One good example is cassava. China is estimated to account for more than two-thirds of global imports of cassava. However, exports from Cambodia and Thailand have been negatively affected by China's policy to auction government stockpiled maize, a substitute for cassava. This also affects exports of maize from Myanmar, most of which is destined for the Chinese market.

The findings above underscore the reality that the contribution of AVCs to broader development goals will require reforms in several policy areas. Nevertheless, the AVCs in the GMS countries studied in this volume have generally advanced further than might be expected given their overall level of development, and have significantly increased the incomes and improved the livelihoods of low-income households engaged in agriculture.

1.4 NON-TARIFF MEASURES ON AGRICULTURAL EXPORTS TO CHINA: TRENDS AND MAJOR CHALLENGES

One major challenge that can affect the competitiveness of agricultural exports from CLMV-T is the increasing application of NTMs on cross-border trade in agricultural goods. Analysis by the FAO (2017) reveals that:

- Countries apply some form of NTMs on imports of almost half of all agricultural products.
- NTMs are becoming more complex, affecting agrifood products in particular.
- On average, NTMs can contribute twice as much as tariffs to overall trade restrictiveness in high-income countries.
- The incidence of NTMs is higher on agricultural tariff lines than on manufactured products; and on agricultural exports from low-income countries, it is four times higher.
- NTMs for processed agricultural products can have a higher impact on trade than plain tariffs.

While NTMs are necessary to address legitimate concerns about food standards and safety, they can also be manipulated to act as barriers to trade that can disproportionately affect exports from developing countries.

As the studies in this volume reveal, the NTMs facing agricultural exports from the CLMV-T come in three forms. The most obvious form would be NTMs imposed by the importing country, which could take the form of technical barriers to trade (TBT) as well as sanitary and phytosanitary (SPS) requirements. NTMs highlighted in the studies include requirements for import registration, certification and traceability, inspection and quarantine, storage and transport conditions. Importers could also require shipments to pass through a specified port of customs in case of disease outbreaks.

The exporting country itself, however, can also impose NTMs in the form of export-related administrative requirements such as export permits or certificates of conformity, along with other documents to guarantee quality. For such countries as Thailand, which also imports fresh cassava tubers to supplement local production, local enterprises also need to contend with NTMs imposed by Thai regulators on the import side.

As the chapters in this volume show, all of the CLMV-T continue to struggle with the NTMs that are currently in place. The issues related to

NTMs include: (1) more complex trade procedures, especially with respect to obtaining SPS certificates; (2) delays at the borders; and (3) lack of publicly available information on relevant NTMs. Difficulty in complying with technical and product standards is also an issue. Technical capacity is the main challenge for conformity assessment and harmonized technical regulations in the least developed countries such as Laos and Myanmar that lack qualified testing laboratories, sufficient competence in accreditation bodies, and skilled professionals to implement post-market surveillance. Meanwhile, challenges at firm level include the lack of appropriate technology and capabilities to meet identified standards, as well as the lack of supporting professional organizations.

There are some welcome developments worth highlighting. The Cambodia country study notes that in terms of the export of processed and semi-processed cassava and sugar cane products, exporters have so far been able to comply with Chinese standards due to large investments in modern processing facilities. The Vietnam country case study also reports that Vietnam has the capacity to comply with regulations of markets such as Japan, South Korea, Europe and the US that currently have far more stringent requirements than China.

Moreover, the regression analysis presented in Chapter 2 suggests that the number of NTMs imposed by China has declined by an average of 0.047 per year over the recent past. The authors note that China actually began actively reducing NTMs even before its accession to the WTO and retained only those NTMs that are allowed by the WTO.

However, the country studies also highlight that although the number of NTMs imposed by China is declining, China seems to be tightening the enforcement of existing regulations. The Myanmar country study suggests that implementation of measures at border-crossing points can be somewhat arbitrary, leading to uncertainty that can result in price volatility. Given all the potential opportunities for increasing trade in agricultural products between China and the CLMV-T, ensuring that these developments do not create barriers to trade becomes increasingly important.

1.5 POLICY IMPLICATIONS AND RECOMMENDATIONS

The issues identified by the country case studies highlight the need for governments in the CLMV-T to sustain domestic reforms and pursue regional cooperation in several areas. Priorities for action plans and reforms include the following:

(1) Improving absorptive capacity and overall competitiveness
Sustained reforms at the national level will be necessary to address both firm-level constraints and broader policy and institutional challenges that continue to hinder absorptive capacity and overall competitiveness. These will include:

- *Investing in human capital to enhance skills, productivity, innovation and specialization along the entire value chain.* Agricultural extension services are needed to help producers improve production techniques and foster the adoption of new technologies and production standards. At the same time, strengthening the provision of and access to vocational training, tertiary education and lifelong learning will be critical to meet the demand for skilled labour at other nodes of the value chain. Although contract farming arrangements may include some elements of skills development, public provision will continue to be important given the public goods nature of agricultural extension services (FAO and OECD 2019).
- *Promoting producer associations and professional organizations.* Investments in human capital need to be complemented by efforts to promote producer associations and professional organizations in the agricultural sector. Global experience highlights the important role these institutions play in enhancing services provision, developing and delivering extension programmes, transferring knowledge and technology, and mitigating transaction costs. More importantly, they play a central role in strengthening the governance and inclusivity of AVCs by empowering their members to form common positions, play an advocacy role, and engage in negotiations with both state and private actors. These institutions are integral to overcoming constraints faced by smallholders and small and medium enterprises. However, although countries such as Thailand have taken steps to support the formation of such groups, the findings in this volume show that participation remains limited.
- *Strengthening the enabling environment for AVC development.* Reforms to improve the overall business environment should be accelerated to support the development of AVCs and strengthen the competitiveness of local enterprises. Both research by the FAO (2017) and the studies in this volume identify the following reform areas as particularly important: establishing efficient land markets and tenure systems;

enhancing access to rural and agricultural finance and risk management products; providing adequate infrastructure (particularly transport networks, storage facilities, irrigation systems, water and electricity supplies); improving customs administration; reducing red tape; and combating corruption.

(2) Improving the contracting environment for AVCs

Given the shift towards greater vertical coordination and the increasing popularity of contract farming, governments will need to review their domestic regulatory frameworks to ensure that the contracting environment for AVCs promotes arrangements that are not only profitable but also equitable and sustainable. This is a challenging but necessary task. As UNIDROIT, FAO and IFAD (2015) point out, relevant laws and regulations will include not just those specific to contracting in agriculture, but also general contract law, agricultural laws, commodity-specific legislation and supply chain legislation. Laws that may have an indirect effect on agricultural contracts, such as labour and environmental legislation, will also need to be considered. These frameworks need to be strengthened to address issues surrounding the governance of AVCs, the responsibilities of lead firms, the distribution of power and benefits within AVCs, and dispute settlement, among others.

There are a number of helpful resources that can help domestic regulators in the CLMV-T undertake this work. These include the 2015 Legal Guide on Contract Farming produced by UNIDROIT, FAO and IFAD; the Principles for Responsible Investments in Agriculture and Food Systems (CFS-RAI Principles) endorsed by the Committee on World Food Security in 2014; the Principles for Responsible Agricultural Investment developed by the FAO, IFAD, UNCTAD and the World Bank; and the OECD-FAO Guidance for Responsible Agricultural Supply Chains produced in 2016.

(3) Increasing local capacity to comply with non-tariff measures

On the policy side, The CLMV-T will need to accelerate efforts to reduce administrative barriers on the export side, align regulatory systems with the WTO agreements on SPS and TBT, and adopt regulatory frameworks that are harmonized with international guidelines or standards.

On the capacity side, governments will also need to strengthen efforts to invest in skills development and institution-building for testing

procedures and conformity assessments. Public-private partnerships will be necessary to prioritize areas for assistance and promote awareness of NTMs imposed by major training partners. These partnerships can also be used to develop and deliver training programs that are tailored to address the specific capacity needs of multiple actors along the value chain.

Finally, in order to ease constraints on public testing facilities, governments may wish to consider accrediting third-party laboratories that can handle testing procedures and conformity assessments.

(4) Diversifying export markets and baskets

The analyses in this volume highlight the importance of China as a major market for agricultural exports from the CLMV-T. There is a risk of the CLMV-T becoming increasingly dependent on a relatively small range of products for which there is a growing demand in the Chinese market. The CLMV-T clearly need to diversify both their markets and products. One option highlighted in this volume is a shift towards markets that have a greater demand for premium agricultural products, such as organic and fair-trade agricultural products that create a higher value supply chain.

(5) Strengthening regional cooperation

As participants in several regional cooperation platforms, GMS countries have numerous opportunities to use regional cooperation to complement domestic reform efforts and address pressing policy issues. Joint efforts in three areas are particularly crucial:

- Increasing investments in cross-border transport and trade facilitation. Improving connectivity through investments in cross-border infrastructure remains a major priority for GMS countries. The GMS Regional Investment Framework 2022 estimates investment needs amounting to US$77.7 billion for transport projects in the pipeline. Another US$106 million will be needed to finance investments in transport and trade facilitation. Not all of these projects have identified sources of financing. China's Belt and Road Initiative opens up opportunities for increased investments in cross-border infrastructure. At the same time, ASEAN has been developing an initial rolling priority pipeline of ASEAN infrastructure projects that have been shortlisted by the World Bank to achieve the implementation of the

ASEAN Master Plan on Connectivity 2025. The pipeline should further help the CLMV-T prioritize projects and mobilize financing from both development partners and the private sector.

- Strengthening cooperation on trade facilitation and NTMs. Critical measures include improving the implementation of bilateral transport agreements and the Cross-Border Transport Agreement under the GMS Programme, and strengthening joint capacity building and harmonization of standards. The CLMV-T could take advantage of initiatives to improve and harmonize standards under the ASEAN Food Safety Network. The APEC's Food Safety Cooperation Forum and its public-private Partnership Training Institute Network may also provide additional avenues for capacity building. China and the CLMV-T may want to consider special agreements to reduce non-tariff barriers and increase import quotas for products of interest, in line with China's food security policies and strategies.
- Sustaining or initiating programmes specifically aimed at developing AVCs within the GMS. The GMS Programme has already adopted the Strategy for Promoting Safe and Environment-Friendly Agro-based Value Chains in the GMS and Siem Reap Action Plan 2018–22. The strategy aims to help the GMS become a leading global supplier of safe and environment-friendly agricultural products through four pillars: policies, infrastructure, knowledge and marketing.
- Meanwhile, contract farming is a key initiative under the Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy. Moving forward, China has decided to set up pilot free trade zones in Guangxi and Yunnan in 2019; GMS countries may want to examine whether these pilot zones could be used to cluster agri-business investments and interventions.

Most of these challenges are long term in nature and addressing them will take time. Improving absorptive capacity, enhancing domestic skills, and diversifying export products and markets will not happen overnight, although countries should start working towards them as soon as possible. In the short run, efforts to improve regional cooperation can be more vigorously pursued. Also, the unequal distribution of economic gains across actors in the value chain, as highlighted in the Laos and Thailand country studies, should and could be addressed quickly so that they do not become constraints to the growth and upgrading of AVCs.

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