

# Policy Brief

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## Agro-food Horizons for Thailand

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## 1 Introduction

The Thai economy will continue to face many challenges over the coming decades, but one sector, Agro-food sector, offers the nation a new generation of opportunities in three important areas: Sustainable Growth, Poverty Reduction, and Economic Security. This policy brief reviews recent events and their implications for Thailand's future prosperity in these three areas.

## 2 Sustainable Growth

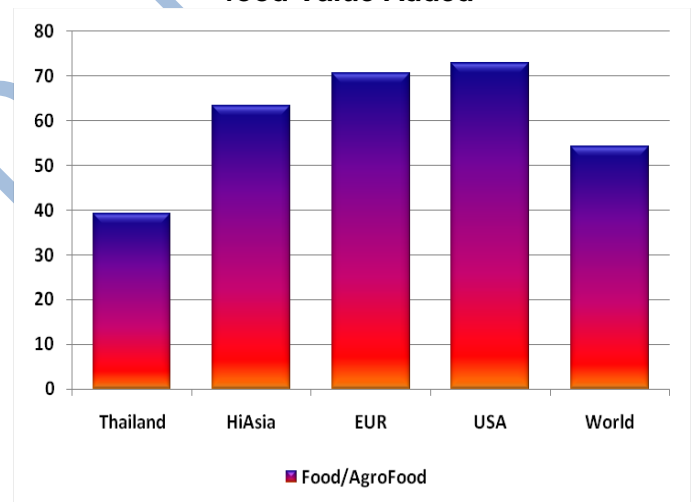
Thailand has already established itself as a regional leader in agro-food production, supply chain development, and marketing. For reasons discussed below, however, this sector can make an even greater contribution to the pace, scope, and sustainability of the country's long term economic growth. The primary drivers of Thailand's agro-food potential are higher food value added, regional integration, and China's economic emergence. With proactive policy initiative in both these areas, Thailand can capture enormous economic benefits from its own agro-food potential and that of its neighbors.

### Higher Food Value Added

Thailand has the most advanced processed food industry in the GMS region. Despite this fact, however the following figure suggests that processed food could still contribute much more to agro-food value added. Compared to higher income economies, e.g. High Income Asia (Japan, Korea, and Taiwan), Thailand could increase food processing's share by over 50%. Not only would this increase overall income from the nation's most important renewable resources (land and people), it offers opportunities for more balanced and employment intensive development across

Thailand. Because Thailand has significant agricultural capacity in nearly every province, agro-food development can be decentralized more effectively than industry and urban-based services, spreading the benefits of modernization and higher wages. It is especially noteworthy that, in the highest income countries food constitutes a substantial majority of agro-food value added, and agriculture ministries in these countries have significantly advanced their institutional authority by promoting and retaining administrative jurisdiction over prosperous modern food processing industries.

**Figure 1: Food Processing as a Share of Agro-food Value Added**



Continuing his long history of public-private partnership in this important strategic sector, Thailand should establish a new generation of policies that facilitate deeper and more extensive private commitments to agro-food development. These would include, but not be limited to, ag-biotech and related R&D commitments, expanded and coordinated public/private extension services, incentives for regionalization of agro-food processing and supply chains, and strong commercial regulatory support for Thailand's export and import requirements in this sector.

## Regional Integration

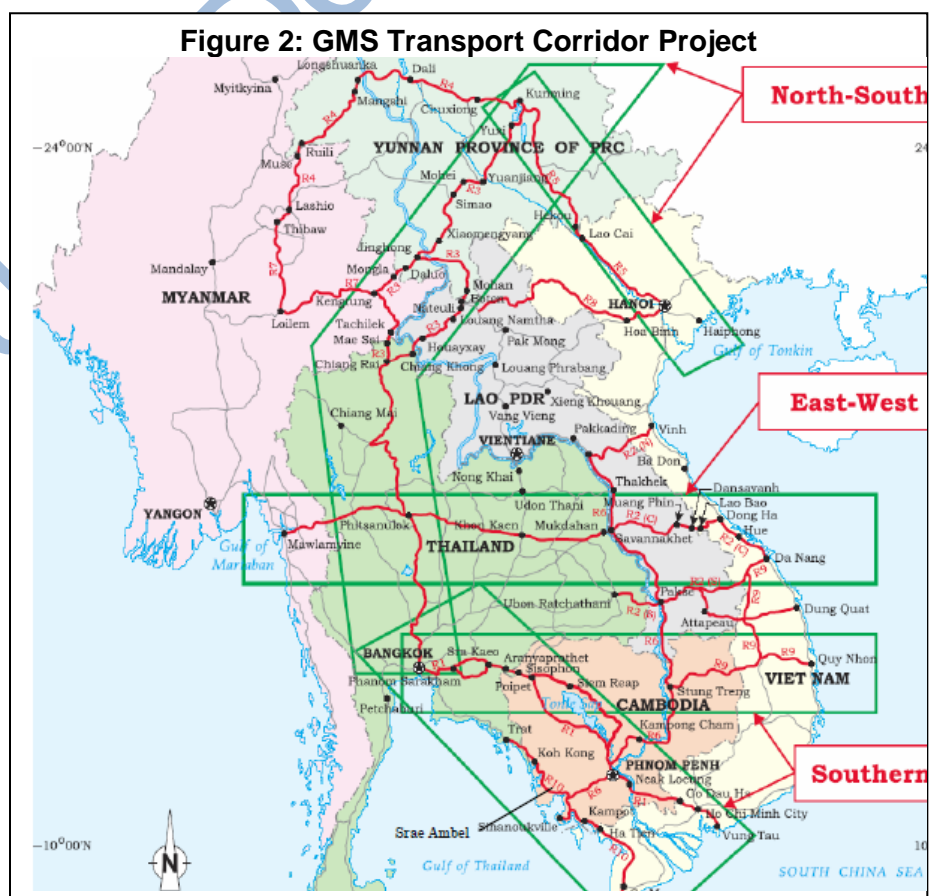
Thailand's geocentric regional position was historically a perennial source of political and military rivalry, but in the future it offers dramatic opportunities for domestic and international economic growth. As Asian economic integration proceeds, Thailand can be a primary beneficiary because of its geographic position between the world's two most populous economies and because of the relatively lower income status of its neighboring markets. All these relationships offer superior growth potential if Thailand takes advantage of its potential as an economic integrator, both in product supply chains and in finance. By doing so, Thailand can advance its own commercial interests domestically and abroad, while contributing positively to the growth potential of its neighbors. In this context, agro-food should be a leading sector.

### 2.1.1 Supply Chains

Thailand's agro-food sector has already established supply chain systems that meet the highest global standards. Now it must expand these nationally and extend them regionally so that their economic benefits can be conferred on lower income groups across the GMS. Fortunately, Thailand need not act alone in this initiative, since its neighbors and multilateral institutions all recognize the advantages of integration, as exemplified by the vast new GMS transport corridor project underwritten by ADB (Figure 2). This ambitious infrastructure initiative clearly acknowledges Thailand's importance as a hub for the region, and domestic policies must respond appropriately to realize the full potential of this opportunity.

In the agro-food context, this means policies to promote supply chain development, logistic support, regional investment, and financial integration. Because it already has the region's most advanced agro-food supply systems, Thailand has first-mover advantage in the race to modernize agro-food systems regionally. This can be strongly facilitated with dialogue and cooperative agreements supported by constructive bilateral outreach and communication strategies. These policies will enable Thailand to profit from its own integration into the region and by providing integration services to its neighbors. The GMS infrastructure system offers market access to all member countries, but the commercial benefits will accrue to the most enterprising intermediaries of any nationality.

This is particularly important in the context of agro-food, where we see the potential of Thailand's

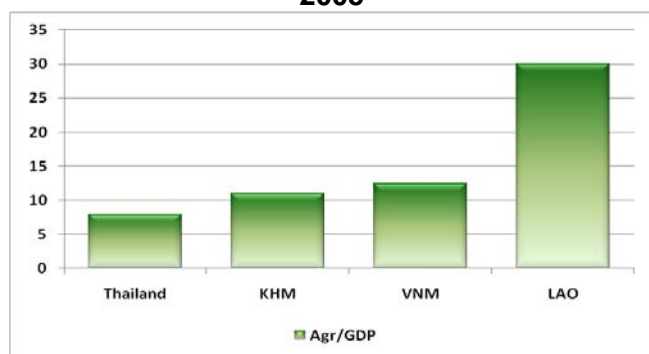


intermediary role clearly. By the metric of



agriculture's share in GDP, Thailand's neighbors are all more agrarian economies. This means they offer new horizons for Thai enterprises to build downstream agro-food systems and integrate these with their home supply chains. By doing so, Thailand will increase its own agro-food capacity and capacity use, increase value added across its agro-food economy, and contribute to technology transfer and higher incomes for its neighbors. This kind of win-win approach to regional integration deserves strong public support.

**Figure 3: Agriculture as a Percent of National GDP, 2005**



### 2.1.2 Finance

In the financial realm, policies should promote both outbound agro-food Foreign Direct Investment (FDI) and Thailand's natural position as a regional financial center. With the most advanced banking, equity, and bond markets in the GMS, Thailand is a natural center for agro-food industry capital sourcing. An area where Bangkok remains well below its potential, however, is financial intermediation of commodity markets. Just as Chicago was a more logical choice for commodity markets than New York, Bangkok is a natural regional commodity center because of geographic centrism. With appropriate enabling policies and financial regulation, the city could host a wide spectrum of commodity financial services, including the full array of modern risk management tools used in OECD agricultural markets.

## China's Emergence

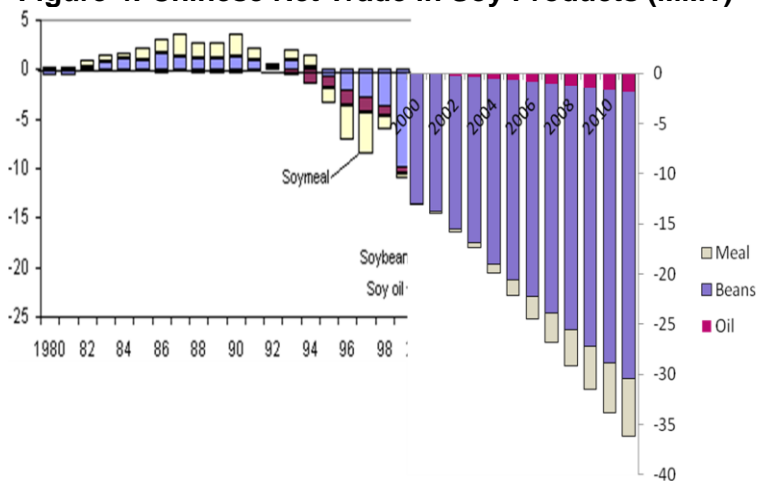
Throughout their long shared history, Thailand and China have enjoyed many periods of mutually beneficial commercial relations. As China has surpassed Germany to become the world's third largest economy, and is likely to overtake Japan over the next two decades, unprecedented new opportunities for Thai-Chinese bilateralism will arise. This particularly true in agro-food, where Thailand's established comparative advantage could leverage the world's fastest growing economy to accelerate agricultural productivity and rural development across the nation.

Apart from its abundant labor and coal, China is a very resource scarce economy. With 20% of world population, China has only 7% of world arable land and this area has been shrinking for two decades because of urban displacement and degradation. At the same time, water resources are very unequally distributed nationally and urbanization is seriously depleted water stocks available for agriculture. Finally, rising incomes in China are shifting consumer tastes toward more resource intensive agro-food products like meat. All these forces are tipping the national food balance against self-sufficiency, with the result that within five years China will become the world's largest importer of agro-food products. At the moment, this trend is already apparent in basic agro-food commodities. As the following figure illustrates, fifteen years ago China was a net exporter of soy products, while today it is the world's largest net importer. As Figure 5 shows, the majority of this growth is driven by increased animal feed requirements.

What is already occurred with extensive crops will eventually also happen with specialty crops and higher value added agro-food products, as Chinese incomes continue to rise and consumer tastes become ever more resource intensive. Just as it did with higher income Asian economies, this process will open new markets for Thai agro-food products

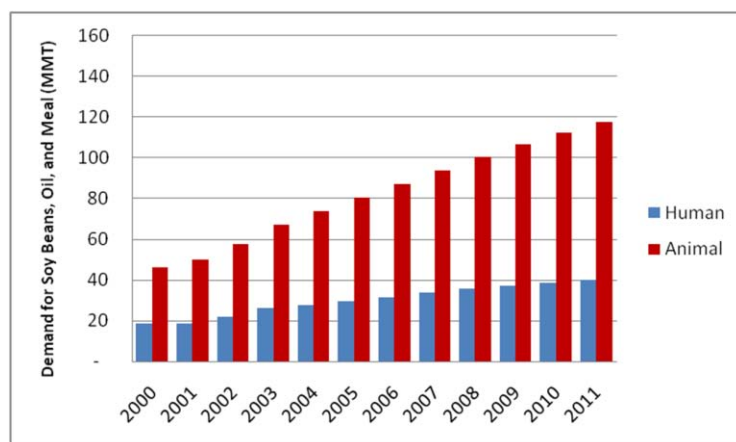
and supply chains, but on a scale that has never been seen before.

**Figure 4: Chinese Net Trade in Soy Products (MMT)**



Source: USDA

**Figure 5: Chinese Soy Demand by End Use**



Source: USDA

### 3 Poverty Reduction

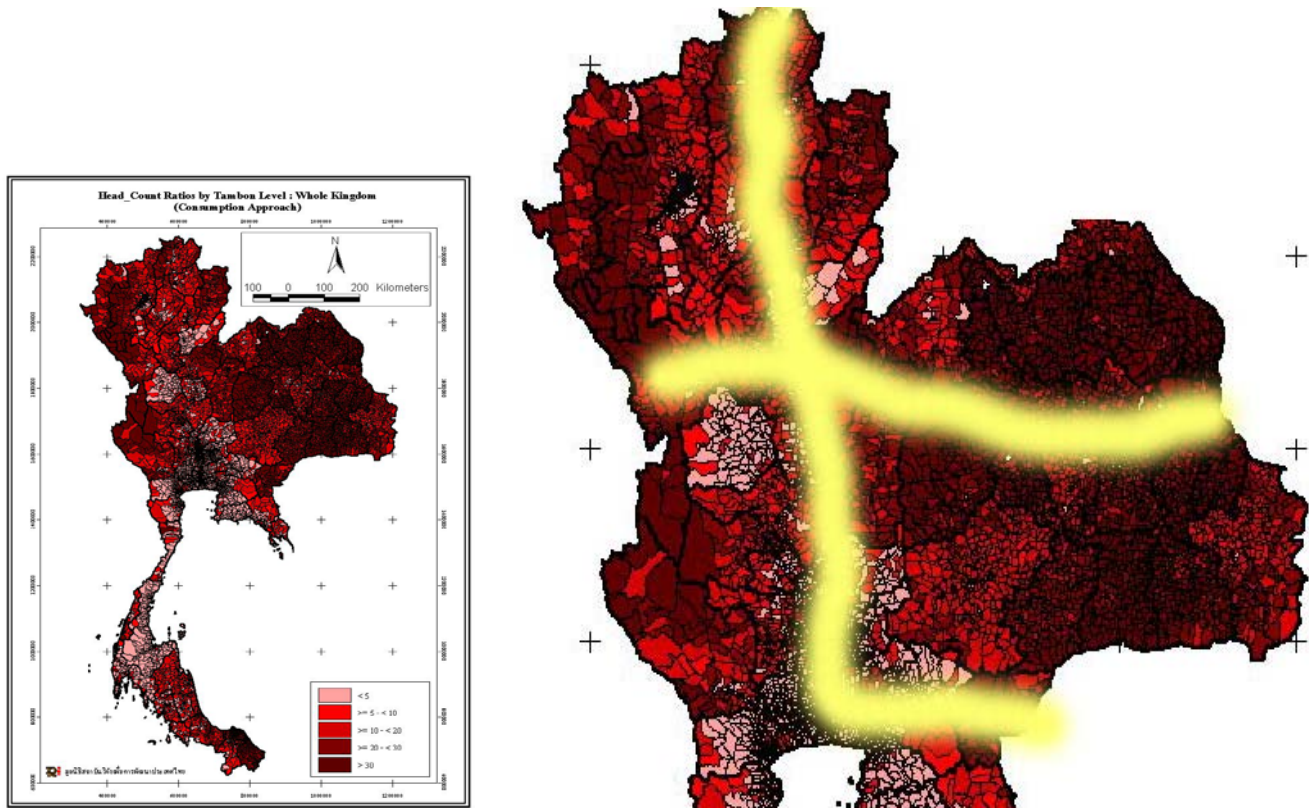
Despite its status as a middle income country, rural poverty remains extensive in Thailand. The basic challenge for the nation in this context is whether farming will remain an emblem of poverty or a catalyst for poverty reduction. Accelerated and more sustained agro-food growth can be potent

catalysts for rural poverty alleviation, but only if this development is regionally decentralized. The overall forces of regional integration and Chinese emergence offer important stimulus for this process, but benefits for the poor will be more widespread if public and private agency take advantage of opportunities presented by new markets and infrastructure.

Consider the GMS corridor system as an example. In the left panel of Figure 6 we see a map of tambon-level poverty headcounts for Thailand, while the right panel overlays the North-South and East-West GMS corridors over the main part of the country. It is plainly evident that this new infrastructure will confer greater market access upon some of the country's most poverty-intensive regions, opening opportunities for self-directed poverty alleviation linking poor farms with urban markets. Even in cases where distances are large, these new corridors mean more extensive market participation can be facilitated by intermediaries, including both distributors and contractors. The advantage of market access oriented poverty reduction is the substantial role played by private agency, limiting the need for sustained fiscal commitments.

An illustrative example is poultry production, a sector where Thailand has world standards and regional leadership in technology, marketing, and supply-chains. As the right panel of Figure 8 suggests, most industrial poultry and its higher value-added food processing activities are concentrated in and around established urban areas. This is a logical result of legacy markets and transport infrastructure, but the new GMS corridor changes both of these, reaching out to new regional markets and offering more efficiency upstream logistics to rural Thailand. For similar reasons, traditional backyard poultry are concentrated outside urban areas, but the corridors now transect these regions and offer fertile new ground for developing expanded poultry production capacity and extensive progress

**Figure 6: Poverty Headcounts and Transport Infrastructure**



Source: World Bank

against rural poverty. The private sector can develop and sustain these more extended production, processing, and marketing networks, but the government can also play a strong facilitating role by promoting appropriate private institutions (e.g. contracting and producer cooperatives) and delivering complementary hard and soft public infrastructure (additional transport and communications, administrative, regulatory, and extension services).

Finally, it is worth noting that Thailand's example of using market access for self-directed poverty alleviation will set an important standard for the GMS region. As is apparent from Figure 8,

regardless of the status of the national poultry sector, backyard poultry are ubiquitous in GMS countries. Again, these birds can be more than an emblem of poverty for many rural households. What are needed are institutions that promote expanded intensification and partial aggregation of this sector, possibly combined with programs to advance sustainable husbandry and marketing of legacy poultry varieties (e.g. after examples of several Royal projects). The result would include higher incomes in rural areas, greater consumer product variety, and sustained improvements in product quality, productivity, and nutritional standards.

Figure 7: Spatial Distribution of Chicken Production

### Density of Industrial Chicken



### Density of Backyard Chicken

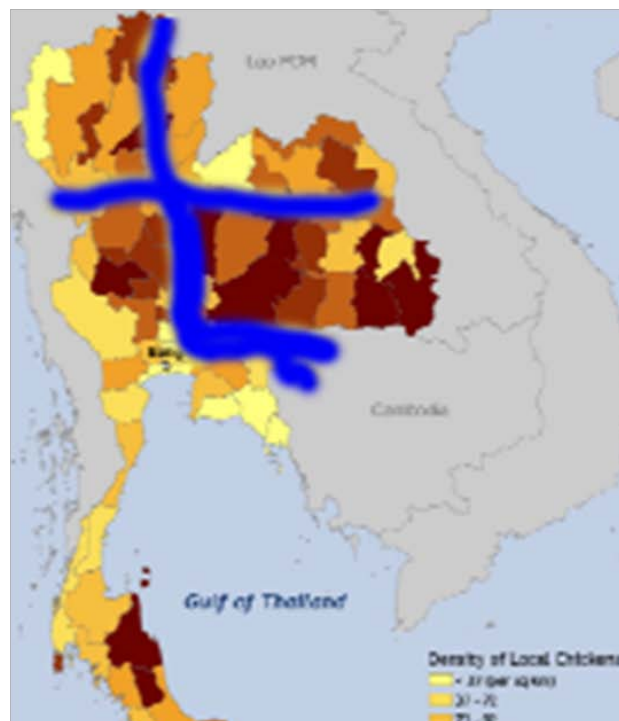
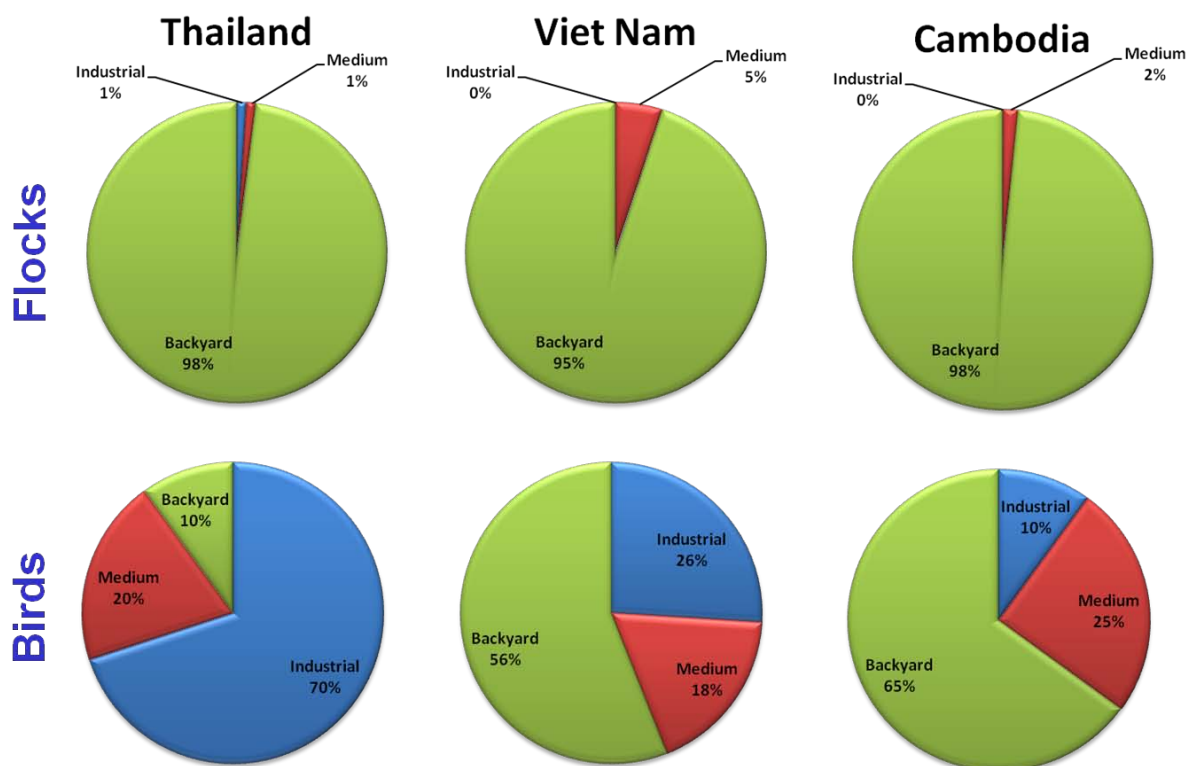


Figure 8: Poultry Population and Flock Composition





## 4 Economic Security

Agro-food policy has always been a national security policy, and with the advent of biofuel innovation this is even truer today. Food is essential to survival, while energy is essential to prosperity. Because of its relatively large per capita agro-food potential, combined with strong growth aspirations and a significant low income population, Thailand will face important opportunities and challenges in these areas. These should be addressed in a balanced manner that exploits economic advantages inside and outside the country.

### *Food security*

Every government has a fundamental responsibility to protect its population from the threat of hunger, and even a middle income country like Thailand must guard against adverse price trends in essential commodities. In the context of food, however, it is important for a resource rich country like Thailand to recognize that food security is not synonymous with self-sufficiency. Countries whose consumption has far exceeded their agricultural capacity, like Singapore and even Japan and Korea, must recognize that food security requires a combination of domestic agriculture promotion and international policy that exploits more complex market advantages. As these countries have learned the superior incomes and growth from industrialization can be bartered for basic food imports, so Thailand should recognize that higher value added agro-food production may offer growth and income dividends over subsistence commodity production. For example, Thailand can leverage its more advanced agricultural and food processing technology for greater specialization in intensive crops and livestock, while importing lower value primary commodities from its neighbors. Such policies should be supported, however, by inventory

systems that permit Thailand to contend with food price volatility.

### *Energy security – the Biofuel Option*

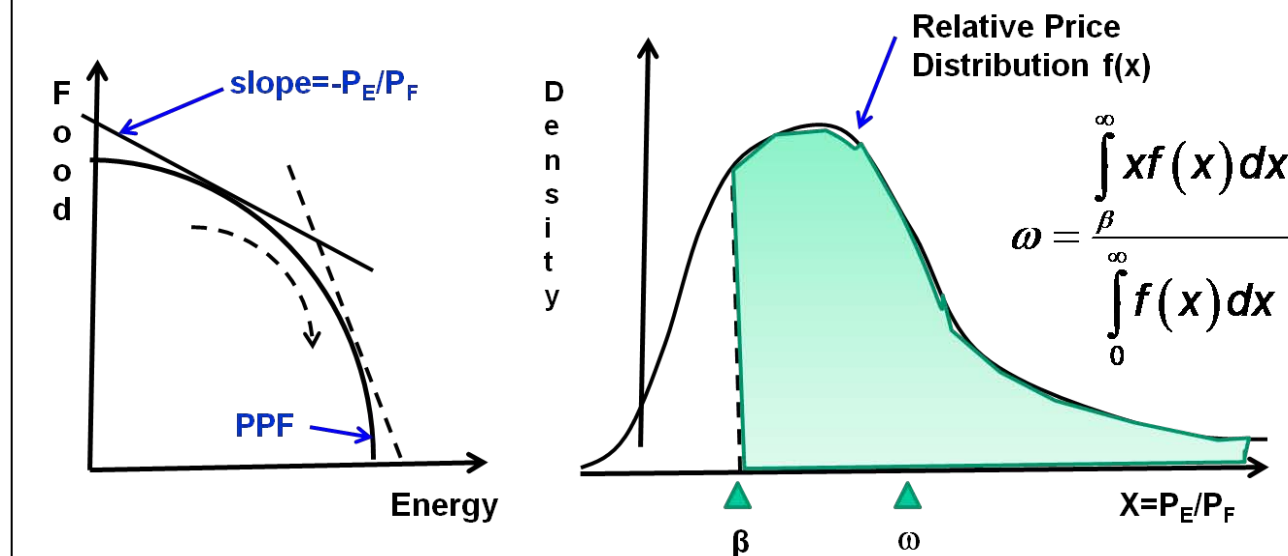
That Thailand has substantial biofuel capacity is obvious to most observers, but the best way forward to develop this potential is much less apparent. Recent events in global food markets have reminded us that food-fuel interactions complicate biofuel strategies that might otherwise be attractive for environmental reasons. As with food security, however, the basic principles of diversification against uncertainty apply. In the context of biofuel, this means that the right combination of food and fuel commitments from agriculture may be uncertain, but it is essential to establish and secure the biofuel option for the sake of flexibility.

Biofuel can contribute to Thailand's sustainable development in very diverse ways, from urban transport fuels to village level heating and cooking technologies. Some argue that energy and food price uncertainty make biofuel development risky. In fact, these conditions make over or under commitment to biofuel risky, but they make essential the capacity to shift national resources between these two essential commodities. In most applications, biofuel development requires fixed investment and technological innovation. For a country like Thailand, with the luxury of choosing between food and fuel production, the biofuel option must be established and maintained. We cannot reliably predict the relative prices of food and energy over the long run, will need Thailand needs the capacity to respond if the food/energy terms of trade shift strongly. Figure 9 shows how, at the macroeconomic level, biofuel represents an important policy hedging instrument.

This option value for biofuel suggests that it is incumbent on the public sector to promote incubation of these technologies and their



Figure 9: The Option Value of First Generation Biofuel



experimental deployment. Just as we have seen in a variety of Royal projects, local biofuel development makes sense on environment and efficiency grounds. Likewise, changing food/fuel prices may offer economic opportunities to shift resources, and because of its highly diverse economy, extending from agrarian subsistence to transport/electric intensive urbanization, Thailand can establish technology standards across a broad spectrum of biofuel applications, improving its international competitiveness and domestic security.

on its regional leadership and a strong collaborative legacy of public-private agency in this sector, Thailand can overcome these and establish new horizons for agro-food development.

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## 5 Conclusions

For a nation with Thailand's agro-food potential, policies toward this sector will remain central to the long term pace and scope of national prosperity. Fortunately, a variety of emerging circumstances offer historic opportunities for agro-food to enhance its already substantial contributions to Thai livelihoods. Among those we review here are an new generation of regional economic relations, infrastructure commitments that can broaden the basis of Thai prosperity, and a technologies that can improve the country's food and energy security. All these areas present important challenges going forward, but building

This Poicy Brief is part of a series of research studies to support more effective public-private partnership in Thailand. In addition to disseminating original research findings, these studies are intended to contribute to policy dialog and public awareness about Thailand's economic prospects and sustainable development. All opinions expressed here are those of the author and should not be attributed to their affiliated institutions.