

EI-ADO Value Chain Export and Import Patterns Synthesis Report

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Introduction

This brief report on export and import patterns is one of a series of reports synthesizing the main findings across the ten commodity value chains studied as part of the Eastern Indonesia – Agribusiness Development Opportunities (EI-ADO) project. Other short synthesis reports in this series include an analysis of spatial patterns, chain structure, chain conduct and growth patterns of the various commodities studied.

Export and Import Patterns

External demand played no role as a source of growth in the production of EI-ADO commodities (see Table 1). In 2007 Indonesia exported just 1% of its shallot, potato and maize harvests. Export shares for tomato, soybean, mango and cattle were even lower. By 2011, these had declined for all crops except shallot and mango. During this period, shallot and mango exports increased by 47% and 24% respectively, albeit from a very low base of 1% and 0.1% of total production, while the quantity of fresh chilli sold outside Indonesia remained virtually unchanged. Exports of maize, soybean, tomato, and potato fell sharply. Hence, any proposed interventions made to AIPD-PRISMA promoting increases in the production of study commodities would have to be fully absorbed by the domestic market.

Table 1: Exports of EI-ADO commodities, 2007-11

Commodities	Share of national production (%)		Change (%) 2007-11
	2007	2011	
Shallot	1.2	1.5	47
Potato	1	0.5	(47)
Maize	0.8	0.1	(88)
Tomato	0.3	0.1	(64)
Soybean	0.3	0.1	(71)
Chilli	0.1	0.1	6
Mango	0.1	0.1	24
Cattle	0	0	0
Peanut	n.a.	n.a.	n.a.
Mungbean	n.a.	n.a.	n.a.

Source: Author's calculations based on BPS and FAOSTAT data

Indonesia's share of global production of EI-ADO commodities is significantly higher than its share of global exports. This provides a strong indication that the country is not yet competitive in international markets. However, as shown in the mango value chain study, Indonesia enjoys unique comparative advantages in Asian markets as its main harvesting season coincides with the off-season in all other countries in the region, some of which are major mango

consumers, such as China, India, Thailand, Vietnam and the Philippines (Wandschneider *et al*, 2013).

Yet, exporters lack the knowledge of post-harvest technologies and management systems required for extending fruit shelf-life and making the transition from very expensive air freight to sea freight. These constraints could be addressed through action-research developed in close collaboration with selected exporters. This should be a strategic priority for government and international development agencies due to the likely income gains for farmers participating in export chains, the applicability of post-harvest innovations to the long-distance inter-island trade, and the potentially systemic impacts of export development on farm-gate prices during the peak October and November season, when the market is literally flooded with mangoes and farmers have no option but to sell their harvest for very low prices.

There could also be opportunities for developing vegetable exports to nearby countries, such as Malaysia and Singapore, or more distant niche markets, such as Taiwan. For example, the vegetable chain research team met with managers of a company in Malang that has been exporting snow and sugar peas to Taiwan for many years. The owner of the company is Taiwanese. The peas are produced by smallholder contract growers. Unfortunately, there are not many similar cases in Eastern Indonesia or other parts of the country. The vegetable trade is characterized by high levels of informality and spot market transactions, with very limited involvement of agribusiness firms working closely with farmers to access high-value market opportunities. In other words, vegetable chains are not structured and organized to meet consumer demand and regulatory requirements in export markets. Non-compliance with pesticide maximum residue limits appears to be a particularly significant barrier to entry in those markets: this has been reported as the main reason behind the decline in the vegetable trade from northern Sumatra to Singapore and Malaysia.

On the import side, there is considerable variation across study commodities (see Table 2). Soybean is an extreme case, with imports accounting for 70-80% of domestic supplies. Despite a long history of support measures, which have included subsidization of production inputs, guaranteed floor prices, and tariff and non-tariff barriers to imports, Indonesia has experienced a secular decline in production, which has led to increased dependency on imports for the production of tempeh and tofu, a major source of protein for the Indonesian population, especially the rural and urban poor. Indonesia also imports large quantities of soybean meal, a by-product of soybean oil and a key animal feed ingredient: in 2013 alone, it imported 3.6 million tons (Index Mundi, 2014).

Indonesia is also unable to produce enough peanuts to meet its consumption needs. In 2012, imports accounted for nearly one-third of domestic supplies, compared to 20% in 2007. Imports increased by 48% during this period. Maize and shallot rank third and fourth amongst EI-ADO commodities in terms of import dependency. Maize imports represented over 20% of the domestic supply in 2011, compared to just 5% in 2007. Imports increased more than fourfold during this period, in a context where the animal feed industry expanded very rapidly in response to growing domestic demand for poultry meat. Significant expansion in the shallot import trade, in turn, reflected a structural and widening deficit in local supplies during the first five months of the year, when there is little local production due to rainy weather conditions. Supply shortfalls are being met by Thailand and Vietnam, and to a lesser extent India and Myanmar; four countries with very different seasonal production calendars from Indonesia. Interestingly, increased dependency on outside maize and shallot supplies is occurring despite government efforts to suppress imports through a complex system of quotas and

licenses. During the off-season, Indonesia is not able to produce enough to meet its domestic consumption needs, even in a context where domestic market prices are being supported by trade barriers.

Table 2: Imports of EI-ADO commodities, 2007-11

Commodities	Share of domestic supply (%)		Change (%) 2007-11
	2007	2011	
Soybean	79.1	71.1	(7)
Peanut	20.9	29.7	40
Maize	5	22.2	357
Shallot	12	15	49
Cattle	4.1	2.7	(16)
Beef	0.8	1.4	138
Fresh chilli	0	0.5	2,320
Fresh mango	0.1	0	(9)
Fresh tomato	0	0	(91)
Mungbean	n.a.	n.a.	n.a.

Source: Author's calculations based on BPS, FAOSTAT and USDA data

Imports of cattle are also significant. During the period under review, between 400,000 and 800,000 head were imported into Indonesia every year, mainly from Australia (FAOSTAT, 2014). Significant quantities of beef are also imported from Australia. The cattle and beef import trade is subject to quotas. In 2007, it accounted for 4.1% of Indonesia's cattle population and 0.8% of domestic beef supplies. In 2011 the share of imported animals fell to 2.7%, but increased to 1.4% in the case of beef. Cattle imports were disrupted by a decision of the Australian government to impose a temporary export ban in response to reports about poor treatment of animals in Indonesian slaughterhouses. The Indonesian government subsequently slashed import quotas for both live cattle and beef, partly as a response to the Australian export ban, but also as part of a strong push towards self-sufficiency. In mid-2013, however, it was forced to relax import controls in response to historically high beef prices, which were hurting consumers.¹

Chilli, tomato and mango are very different cases (see Table 2). Despite very strong growth in fresh chilli imports, by 2011 these represented only 0.5% of the domestic supply. The contribution of imported tomato and mango is even lower. These are very perishable crops. Transportation over long distances is expensive and can result in significant physical and quality losses between the farm and retail markets in Indonesia. The country therefore enjoys a fair degree of natural protection. In the specific case of mango, consumer preferences also play a role: Indonesians are used to paying low prices for local, green-skinned varieties and generally unwilling to pay high prices for imported mangoes during the off-season months (Wandschneider *et al*, 2013).

¹ In 2010, imported cattle accounted for up to one-quarter of total slaughter numbers (Waldron *et al*, 2013).

The picture changes somewhat once processed products are considered. Most mango concentrate and pulp used by the fruit juice industry and most dried mango and mango candy sold in Indonesia are imported. The bulk of dry chilli supplies are sourced from India. The food industry uses imported tomato pulp. According to FAOSTAT data, in 2011 Indonesia imported about 20,000 tons of dried chilli and pepper and 10,000 tons of tomato paste. Despite having a significant mango, chilli and tomato production, Indonesia has not been able to capitalize on value addition opportunities for these crops. Some exceptions aside, the fruit and vegetable processing industry in Indonesia is still very embryonic. This is a sector that could be targeted for development due to its potential market stabilization role and the opportunity to generate employment in rural and urban areas, especially for women, who generally account for most of the labour force employed by agro-processing enterprises.

In an attempt to curb rising horticultural imports, the Indonesian government introduced new legislation imposing stricter import licensing rules and limiting the number of ports of entry. A decision to close Jakarta's seaport to horticultural imports was particularly controversial due to its importance as an entry point for supplies to greater Jakarta and the whole western and central Java region. The new regulations came into effect in September 2012. Earlier that year, the Governor of East Java had issued regulation limiting the periods during which horticultural products could be imported into the province, stipulating that any fruit and vegetable imports must be authorized by the Governor, and limiting the share of imported produce sold in stores, malls and modern markets to a maximum of 50%. In March 2012, legislation specifically aimed at controlling shallot imports was introduced in Brebes district, which accounts for about one-third of Indonesia's shallot production.

During the first six months of 2013, the Ministry of Agriculture issued no recommendation for the importation of 15 fruit and vegetable items, a decision that amounted to a temporary import ban, and imposed strict import quotas for 11 horticultural products, including shallot and onion. The price of fruits and vegetables soared as a result of these measures (Wandschneider *et al*, 2013b). For example, in the first three months of 2013, the price of shallot in Surabaya was five to seven times higher than during the same period of 2012.

The inflationary impact of recent import restrictions should have been anticipated. Import bans and strict import quotas were applied to agricultural crops characterized by a price-inelastic supply, at least in the short term. Self-sufficiency policies are therefore being pursued at the expense of urban and rural consumers, including the poor, with welfare losses further exacerbated by a series of regulatory measures that create unnecessary barriers to entry into the import trade, inflate distribution costs within Indonesia, and limit the ability of importers to perform spatial arbitrage functions (Wandschneider *et al*, 2013). Discretionary administrative controls also create an environment prone to rent-seeking.

While benefits to farmers and rural communities are presented as the main justification for import restrictions, those may not be as high as expected. The reasons are twofold. First, for some agricultural commodities, say shallot or maize, significant import substitution is only feasible under a very restrictive trade policy environment because imports are concentrated during periods when weather conditions do not favour local production. In order to be encouraged to grow these crops during the off-season months, farmers will need to fetch unrealistically high prices that can compensate them for poor yields, a context that is difficult to sustain politically. A more moderate policy is more feasible, but unlikely to have significant impacts on off-season production, and therefore imports. Second, for crops such as potato and shallot, import restrictions also apply to planting material, which inflates production costs,

while also reducing the quantity of quality seed available, with negative impacts on farm productivity and profitability (Wandschneider *et al*, 2014a; Wheatley *et al*, 2014). The costs imposed on local agro-processing enterprises through higher raw material costs raise further questions about the net benefits of current trade policies and regulations.

Clearly, there is a need for a more evidence-based import policy, tailored to the specific production and market conditions in different sub-sectors. Self-sufficiency objectives should be balanced against the interest of consumers, especially the poor. Furthermore, the actual impacts of import protection on farmer incomes should be assessed. The fact that farmers make land allocation decision on the basis of rational profit and risk considerations needs to be accounted for: farmers may decide to allocate more land to a crop in response to import restrictions and their impact on farm-gate prices, but in a land-scarce environment that will come at the expense of other crops.

Finally, there is a strong argument for a more holistic approach to the development of a competitive agricultural sector. In the pursuit of self-sufficiency, Indonesian governments have resorted to import protection and production subsidies. It could be argued that more attention should have been paid to agricultural research and extension, two critical but under-funded areas. As shown in several EI-ADO chain studies, strategic investments in research and extension can make a significant contribution to an upgrading of local variety portfolios and much-needed improvements in disease and pest management practices. Indonesian farmers tend to use excessive amounts of pesticides. Wrong timing of application and poor choice of chemicals are common problems. These practices reduce yields, inflate production costs, and have negative impacts on the environment and the health of farmers and consumers. Significant investment in action-research is needed for the development of locally-appropriate technical solutions. Research on crop storage technologies is also needed. A reduction in storage losses for shallot, for example, would lower planting material costs and go some way in addressing current deficits in local supplies during the first few months of the year (Wandschneider *et al*, 2014a). Research in maize storage technologies is particularly relevant for Eastern Indonesia, particularly in NTT where post-harvest loss can be as high as 30%. Losses of this magnitude not only have significant economic implications but threaten food security for many smallholders.

All references are contained within the Synthesis Collection_References document.