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Agriculture: Trade and Regulatory Policies



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Agriculture is of vast strategic importance to Tanzania. Together with fisheries, agriculture accounts for around 31 percent of Tanzania’s gross domestic product and provides income for some 80 percent of the population (or around 42 million people) in 2016.¹ The country is endowed with an abundance of fertile land, good rainfall, and other natural conditions well suited to producing a wide range of staple foods and high value agriculture products. With less than 25 percent of arable land utilized, Tanzania is thus in a strong position to leverage agriculture both as an engine for poverty reduction and as a driver of economic growth and trade revenue. Growth in agriculture has a disproportionate effect on reducing poverty. Countries with a track record of high agricultural growth have experienced substantial reductions in poverty rates.²

Despite the importance of agriculture, the sector has lagged the rest of the economy leaving many stuck in poverty. For more than 20 years, agriculture has grown at half the rate of the rest of the economy. Since the 2005 DTIS, agriculture value added grew by just 3.7 percent, on average, compared with 8.6 percent and 7.5 percent annual average growth in industry and services, respectively (World Development Indicators, World Bank 2016) Although long-term structural transformation away from agriculture is not a problem providing more people earn their livelihood in other sectors, Tanzania remains predominantly rural, and the country’s strong performance in other sectors has not been sufficient to mitigate rural poverty. As described in the World Bank’s (2015) Mainland Poverty Assessment, the Tanzania’s National Strategy for Growth and Reduction of Poverty (MKUKUTA) has given high priority to eradicating extreme poverty and promoting broad-based growth. Through this strategy, Tanzania continued to record a decline in basic needs poverty.³ Although

this is a significant achievement, most of these gains have been in urban areas and rural poverty remains pervasive. Inequality between rural and urban areas has grown sharply over the past decade and more than 80 percent of the poor and extreme poor in Tanzania are now rural.⁴ The government's Agriculture Sector Development Programme Phase Two (ASDP II) finalized in September 2015 identifies the need for a "major policy shift" to boost agricultural growth. The ASDP II highlights the necessity of increasing agricultural commercialization and encouraging the cultivation of high-value, nontraditional crops.

Taking advantage of the opportunities to increase Tanzania's agricultural exports will benefit both Tanzanian farmers and their trading partners, especially those in the EAC. As highlighted in the World Bank (2012) publication, *Africa can Feed Africa*, fragmented regional markets impose a cost on Tanzania and are increasingly being recognized as a significant contributory factor driving the region's growing dependence on food imports from the rest of the world. With increased trade in agricultural products and increased regional integration (with lower trade costs) Africa could easily feed itself creating countless new and remunerative jobs for small traders and small farmers alike.

Increasing productivity through reducing trade costs and streamlining regulations will support Tanzania in building resilience against potential climate changes. The National Climate Change Strategy in 2012 seeks to strengthen the resilience of the agriculture sector to cope with variations in rainfall and temperature. It identified the importance of promoting drought resistant crops, strengthening weather forecasting, pest risk management, and postharvest processes. Work by the International Food Policy Research Institute shows that changing rainfall patterns will result in some areas increasing their yields while other will lose. With increasing rainfall rice yields were forecast to double. These changes, of course, are not confined to Tanzania's borders but occur in neighboring countries too making regional trade integration one of the best strategies for coping with climate change.

In 2015, Tanzania adopted a 10-year Climate Smart Agriculture Program which identifies six strategic priorities. These include, improving productivity, building resilience and mitigation, promoting integrated value

chains, strengthening research, improving agricultural advisory services, and improving institutional coordination. Realizing higher farm level productivity requires improving access to higher quality agricultural inputs—seeds and fertilizer, providing farmers with good quality technical advice, and making it easier for farmers to sell their products.

This chapter adopts a trade lens to the agricultural sector by focusing on the policy and regulations for agricultural inputs and cross border trade. This chapter aims to: (i) increase understanding on the regulatory and administrative barriers to sourcing agricultural inputs at competitive prices; (ii) consider how existing trade regulations affect the competitiveness of Tanzania's agriculture and have an asymmetric impact on smallholder farmers and small traders, while also addressing the unintended consequences of the high tariffs on sugar and rice; and (iii) identifying throughout how existing regulations and policies serve as specific constraints impact on smallholders and small-scale cross-border traders.

The report identifies four priority trade policy and regulatory cross-cutting constraints which contribute to increasing trade costs. High trade costs reduce agricultural competitiveness which in turn results in lower levels of investment and lower productivity advances. These include: (i) unpredictable application of export bans and a continued reliance on state marketing channels; (ii) high levels of protection and taxes; (iii) complex and nontransparent regulations which limit access and increase the price of agricultural inputs; and (iv) institutional challenges in complying with sanitary and phytosanitary (SPS) measures.

1. Unpredictable application of export bans and a continued reliance on state marketing channels

The imposition of export bans at short notice creates market uncertainty, discourages investment, and increase price volatility. Export bans reduce rural incomes and are rarely effective at reducing price volatility. Even when the export ban is lifted, as long as smallholders believe there is a threat that it may be reinstated at short notice, investment in expanding production will be curtailed. Export bans are difficult to enforce as large price differences across East Africa encourage informal trade.

Reliance on state-controlled market channels that restrict how major commodities are traded is another important barrier to agriculture growth and poverty reduction. Continued reliance on export bans for maize is a particularly contentious area of agriculture policy. Despite numerous studies and reports from Tanzania and elsewhere that show export bans contribute to price volatility, harm poor producers, and are rarely successful in preventing food from leaking across borders, Tanzania and other governments continue to impose trade restrictions when they fear food insecurity. During the 2015–16 El Niño event, Tanzania imposed an export ban on maize due to pockets of food insecurity expecting that surplus food would flow to these areas rather than across the border to other places affected by the drought. Without the use of trade restrictions, however, price signals would normally be sufficient to attract maize to the affected areas and/or to inform government that a relief effort is needed. While the ban may have helped keep some maize in the country, regional grain traders and farmer representatives claim there was a very strong negative impact on farmers in surplus zones who could have exported through legal channels but were forced to accept lower prices from cross-border dealers driven to smuggle.

Other examples of challenges associated with closed-market channels in Tanzania include:

- Cloves can only be exported by the Zanzibar State Trading Company (ZSTC) which enjoys a 100 percent monopoly on the trade of this commodity. While ZSTC has taken important steps to streamline its operations in recent years, this policy prevents private firms from competing for business, even with ZSCT, through provision of value added services and price incentives to farmers.
- Coffee was ostensibly liberalized in 1994 with the introduction of private buying by large multinational companies, yet all coffee must still be sold on Moshi Auction run by the Tanzania Coffee Board (TCB) or through a direct export contract approved by the TCB. Cross-border exports that would benefit from higher prices outside the TCB system are not allowed and coffee may only exit Tanzania through the ports of Dar es Salaam or Tanga.
- A warehouse receipt system (WRS) for cashew was introduced in 2007 and is now mandatory whereby all cashew sales are through auctions managed by the

Cashewnut Board of Tanzania. While the WRS is credited by many for having stamped out collusion and increased competition between processors, cashew buyers and exporters say that the grading done by warehouses is unreliable thereby depressing prices as they factor in this risk. Large buyers also say that closure of all marketing outlets other than WRS has led them to stop support to farmers with new trees and extension advice needed to boost yields and quality. For their part, some growers have complained of being paid in installments rather than on the spot, which leads the poorest producers to sell for cash on the informal market even at a low price. Rather than make WRS sales mandatory, therefore, a better approach to consider would be to allow other private channels to exist alongside the WRS, and to compete with the WRS, so that farmers and buyers each decide which outlet is best for them.

2. Reliance on high tariffs to protect sensitive industries does little to promote investment and may undermine long-term growth

The DTIS update also finds that Tanzania should consider moving away from the use of very high tariffs to protect sensitive areas of agriculture. Under the EAC Common External Tariff (CET), most forms of sugar and rice benefit from 100 percent and 75 percent tariff protection, respectively (or a minimum tariff of US\$200 per ton, whichever is greater). The Tanzanian government states that temporary tariff protection is required for local producers who are unable to compete on the global market owing to structural barriers including outdated seed, inefficient irrigation systems, old processing equipment, and poor roads. While the need for investment in these areas may be clear, it is equally apparent that these high tariffs have created strong incentives for smuggling. Despite recent efforts to crack down on illegal activity, such efforts are likely to be difficult and expensive to sustain, particularly as there are legal exceptions to the CET by mainland Tanzania's neighbors (including an exception that allows Zanzibar to import rice at only 25 percent duty and Kenya to import rice from Pakistan at 35 percent duty). Moreover, the high level of tariff protection, serves to undermine the incentive to make the investments required for increasing competitiveness in the medium and longer term.

3. Opportunities for rural poverty reduction are constrained by unnecessary trade regulations

Although there are many factors that help explain why rural poverty in Tanzania is proving more stubborn to address than urban poverty, this DTIS update clearly shows that opportunities for agriculture growth are constrained by complex and overlapping trade regulations. Over the years, Tanzania has created numerous regulatory agencies and complex trade rules that add to the cost of doing business, delay farmer access to new types of inputs, and prevent small entrepreneurs from competing on equal footing with large companies. Adding to the problem, few (if any) regulatory authorities use genuine risk-based approaches to meet their objectives and instead aim for 100 percent inspection and certification of all traded consignments. Continued reliance on crop marketing boards and consignment-based export permits for maize and other strategic commodities along with the ongoing risk of trade bans and sudden policy changes further undermines the potential for growth by making large and small investments in new technology, forward contracting, and private storage risky.

Tanzania's trade rules are particularly burdensome for small businesses and prevent Tanzanians from sharing in the country's own prosperity. Whereas large firms and multinational companies generally enjoy economies of scale to employ staff to navigate the regulatory environment, small traders wishing to break into business do not, so are easily shut out. Although some trade and regulatory permits are free, many agencies charge fees for their services. Moreover, most permits can only be obtained from the agency's headquarters or, occasionally, through a few branch offices. Consignment-specific import and export licenses, for instance, are only issued by the Ministry of Agriculture, Livestock and Fisheries (MALF) in Dar es Salaam. Although these permits are free, small traders in distant locations must mail their application or travel several hundred kilometers to wait in the city and hope for a favorable outcome while the application is processed. Similarly, the Tanzania Bureau of Standards (TBS) explained that a trader who wishes to export any quantity of grain is required to contact the nearest branch office and pay the costs for an inspector to visit the storage site and certify the product in person. Such requirements are uneconomical for traders with small consignments and

impractical for the agencies to implement. Tanzania's trade procedures, therefore, effectively force many small local entrepreneurs into the informal economy where there are no product controls and problems with corruption and harassment easily arise.

Limited transparency of trade rules is a further problem for agriculture. Although many regulatory agencies have made good progress in posting information on their websites, limited transparency of Tanzania's trade rules remains an important constraint.⁵ TBS standards, for instance, must be purchased from headquarters even though all standards in agriculture are mandatory technical regulations. For its part, the Tanzania Food and Drugs Authority (TFDA) now posts many forms and guidelines on its website yet traders say these are incomplete and very technical, so are difficult to understand. As a staff member of one parastatal marketing board put it "it took us more than four months of constant investigation to find out what is needed to register our products and we are a government agency so could always get an appointment. Imagine how long it would take an ordinary person to find out what is required." Some people met for the DTIS preparation went even further to allege the lack of transparency in all regulatory agencies is a source of corruption since officials can cite an endless number of obscure and difficult to prove rules, even imaginary rules, to charge extra fees or elicit bribes for noncompliance.

Minimizing the regulatory burden on agriculture trade could therefore be of major economic and social benefit to Tanzania. Minimizing the costs of regulatory compliance in both time and money could not only lead to higher farm gate prices that incentivize farmers to raise crop yields and supply more raw material for processing, but would directly benefit some of the poorest individuals most. Of particular note, many small farmers and small traders are poor women who are likely to be particularly disadvantaged by burdensome rules and regulations due to low levels of literacy, time constraints due to family commitments, and gender biases in distribution networks. Both simplifying and streamlining the requirements for domestic and regional agriculture trade is therefore essential for poverty reduction and for small entrepreneurs to grow and prosper. Organizing small farmers into cooperatives as Tanzania has done in the past may be seen to overcome the problem of high trade costs and poor economies of scale, but

does not provide the opportunities local entrepreneurs need to grow and compete on their own.

The Tanzanian government is working to address these bottlenecks and deserves credit for progress made so far. While many large and small private operators met for the DTIS Update described the regulatory environment in Tanzania as burdensome, government has made headway in addressing some important constraints. Fertilizer regulators, for instance, point to the drafting of new rules in 2011 that eliminate the need for field-testing each NPK⁶ combination. Similarly, Tanzania has made good progress in ascribing to regional protocols on seed trade including the Southern Africa Development Community (SADC) Harmonized Seed System and harmonized standards for seed certification of the East African Community (EAC).

While these and other reforms are important, there is still much to be done. While the Tanzania Fertilizer Regulatory Authority (TFRA) states it is implementing the new 2011 regulations described above, it notes that these regulations have not been signed by the minister thereby creating uncertainty for the private sector over which set of rules to follow. Similarly, the Tanzania Seeds Act of 2003 is not aligned with the regional approach to variety release and seed certification. To date, seven new varieties of potato seed have been allowed into Tanzania after just one season of national testing through an agreement with Kenya and Uganda to recognize each other's test data. Unfortunately, however, this agreement has yet to be put into practice with other major crops including maize, rice, sugar, and pulses that are much more important to poverty reduction, food security, and overall trade performance. For these crops, the Tanzania Official Seed Certification Institute (TOSCI) still requires a minimum of two seasons of national performance trials before a variety can be recommended for acceptance.

Elimination of regulatory overlaps may require Parliamentary intervention. In late 2016, the MALF requested all regulatory agencies dealing in agriculture and food products to submit a list of key functions, instructions on how to comply, and details of how much each service costs. According to senior officials, the aim of this exercise was to identify areas of overlap to see what could be streamlined right away and what kinds of higher-level action may be required to address the

situation. Regulatory overlap between TBS and TFDA, for instance, is a well-known bottleneck whereby each agency maintains separate product registration and inspection requirements in the name of food safety. Dialogue between these agencies has been ongoing for some time to agree on the division of responsibility. Various MOUs and other agreements between the agencies have been reached, yet with overlapping legal mandates such an approach can only go so far and there is now growing recognition that parliamentary intervention is needed to address the ambiguity and remove the overlap once and for all.

Greater use of risk-based approaches in all areas of regulatory management would be an efficient way to ensure consumer safety and good reputation of Tanzania's exports. Most regulatory agencies met during the DTIS Update said they are working to computerize their operations and have plans to expand coverage with additional inspectors at more borders. Computerization and decentralization that brings services closer to users is important, yet with each agency still aiming for 100 percent inspection the current approach is not efficient does little to reduce mandatory fees, eliminate institutional overlap, alleviate the burden on overstretched inspectors and laboratories, or speed border crossing times for nonrisky goods. Aiming for full coverage is an elusive goal at best and many countries with significantly more resources to spend on border controls than Tanzania have opted instead to utilize risk-based strategies as the most effective way to protect consumers and fulfill their regulatory objectives. Risk-based approaches to regulatory management therefore not only help to improve trade competitiveness, but are essential for consumer protection (see box 5.1).

Risk-based approaches could be implemented with little cost and would be a good way to address the regulatory bottlenecks to agriculture trade and rural economic expansion in Tanzania. Consistent with international best practice, a systematic approach to spot inspections based on risk profiles of commodity types, places of origin, and even individual traders could make much more effective use of available resources. Such procedures would help Tanzania focus its resources to achieve higher levels of protection while lowering the burden on small traders and creating new opportunities for economic growth and poverty reduction in rural areas. Increased willingness of to accept and use other country

BOX 5.1: Applying Risk Assessment, Risk Management, and Risk Communication

Risks may be defined as the potential damage caused by a hazard, harmful product, or harmful service. Government agencies are responsible for ensuring compliance with regulations aimed at ensuring agreed levels of health and safety protection. Given resource constraints, even in the most developed economies, a 'zero-risk' outcome is not feasible. The challenge for governments and regulatory agencies is to use their scarce technical and physical resources to minimize the risk to public health and safety.

Risk assessment, risk management, and risk communication are important tools for ensuring that regulations are effective and efficient. Risk assessment is a key tool for identifying the extent of the potential harm (in terms of product safety, sanitary and phytosanitary dangers, revenue loss, environmental damage, and so on). Risk management focuses on the design and implementation

of measures aimed at addressing the risks and may include testing, inspection, or suppliers' declaration based on the risk profile of the product and importer. Risk communication refers to the approaches to educating and informing producers and consumers of the risks. Ensuring effective public understanding of the nature of the risks and the applied risk management techniques can increase the public acceptance of the risk elements.

Regulatory agencies need to allocate their scarce resources (laboratories, professional staff) to addressing the most serious risks. Whether the risk is foregone revenue through tax evasion, harmful food products, ineffective fertilizer, or mislabeled seeds, or environmental damage through toxic pollution, the regulator will maximize public safety through applying risk assessment, risk management, and risk communication.

test data, including private test data for crop inputs and finished commodities would also increase efficiency through saving scarce regulatory resources and lowering the costs of introducing new and more productive technologies for agriculture and agro-processing.

4. Building capacity for SPS compliance to increase regional trade in animal-based products.

Tanzania faces serious institutional challenges in complying with SPS measures for livestock and dairy). This limits the opportunities for expanding livestock and dairy trade. Valuable lessons can be learned from the response of Tanzania to the European Union (EU) export ban on Nile perch. With targeted donor support and the commitment of the government and the private sector resources focused on strengthening traceability and compliance with mandatory EU requirements for those firms exporting. This targeted approach on addressing buyer demand was successful and Tanzania was the first East African economy to recommence exporting Nile perch.

Following this overview of main findings, the chapter is organized in four sections. Section 2 looks at recent agricultural sector performance including the important role played by women in agriculture production and trade. Section 3 summarizes Tanzania's agricultural policy and institutional framework with a focus on the major trade and regulatory challenges affecting the ability of Tanzanian agriculture to further increase exports to the region and internationally. This is followed by

Section 4 which highlights recent trends in the maize, rice, sugar, cashew, and fisheries agricultural subsectors that are important to Tanzania as staple crops for food security and as key exports dominated by smallholders. Finally, section 5 presents the recommended priority actions aimed at addressing the constraints to growing the agricultural sector through increasing trade and reducing poverty.

Recent Sector Performance

The Tanzanian government is committed to encouraging investment in agriculture and agro-industry and increasing productivity for jobs and poverty alleviation. The Tanzania Agriculture and Food Security Investment Plan (TAFSIP) sets out the framework for prioritizing investment in agriculture to achieve the goals developed in the Tanzania Development Vision (2025), the Poverty Reduction Strategy Paper, the National Strategy for Growth and Reduction of Poverty I and II, and the FYPD II. This is reinforced in the more recent National Agricultural Policy (NAP) of 2013 that commits to developing "an efficient, modern, commercial, competitive, and profitable agricultural industry." The recently released ASDP II (2016) details the policies, strategies and priority support areas for public and private investment aimed at advancing agricultural growth. Since the 2005 DTIS, the Tanzanian government has implemented a series of reforms aimed at improving the business enabling environment for agriculture to stimulate investment, enhance productivity and increase links to agro-processing.

To date, the commitment to improving productivity and promoting investment through the overarching agricultural programs have focused on improving planning and coordination aimed at strengthening the efficiency of government parastatals and regulatory bodies. This includes the multiple initiatives and programs including ASDP II and TAFSIP linked to the Comprehensive African Agriculture Development Program (CAADP). Prior to ASDP II and the NAP, phase I of the ASDP (2006–13) aimed to improve farmers' access to knowledge, technologies, market systems, and infrastructure, and to increase private investment through improving the policy and regulatory framework. The ASDP was relatively more successful in introducing streamlined planning and coordination through central government and parastatals than at increasing the role of the private sector. More recent initiatives have continued to try to provide the private sector with a more prominent role, but regulatory reform has been very slow.⁷ These include the former President Kikwete's Kilimo Kwanza⁸ Resolve and Big Results Now (BRN), the Southern Agricultural Corridor of Tanzania (SAGCOT)-New Partnership for Africa's Development (NEPAD) initiative, and the USAID's Feed the Future. The BRN prioritized three crops—rice, sugar, and maize—and focused on improving agricultural productivity, increasing market efficiencies, and strengthening analytics and accountability.

While the government's strategy and policy documents highlight the importance of increasing agricultural production and trade through private investment, implementation remains slow. The NAP highlights both the opportunities for increased intra-regional trade within the EAC and SADC in food and crops and the importance of "eliminating intra-regional trade barriers." It notes the importance of working towards increased cooperation in standardization, quality management, metrology, and testing of agricultural products. The NAP identifies the importance of agreeing mutually recognized certification marks along with other methods of quality conformity assessment that reduces trade costs. The NAP illustrates the commitment of the Tanzanian government to continue with regulatory reforms aimed at creating more efficient agricultural markets. However, to date the commitment has not been matched by implementation. Reducing input costs and increasing competitiveness require the Tanzanian government to simplify and streamline the many regulatory hurdles imposed on all farmers and traders.

BOX 5.2: The Tanzania Agriculture and Food Security Investment Plan

The Tanzania Agriculture and Food Security Investment Plan (TAFSIP) is the 10-year (2011–21) sector-wide investment plan aimed at meeting the Comprehensive African Agriculture Development Program's target of 6 percent annual growth in agricultural sector gross domestic product. The TAFSIP provides the framework for prioritizing investment aimed at driving Tanzania's agricultural development. It represents the financing mechanism and framework for implementing the Agricultural Sectors Development Strategy and the Agricultural Strategic Plan for both mainland Tanzania and Zanzibar. The TAFSIP is aligned with both Vision 2025 (for the mainland) and Vision 2020 (for Zanzibar), it is the key policy and strategic statements including MKUKUTA/MKUZA, Kilimo Kwanza, and the Agricultural Transformation Initiative.

Source: Derived from the TAFSIP (2011).

The regulatory burden is prohibitive for many small holders and small traders—they are unable to comply. Larger farmers and traders are able to comply with the regulatory requirements and pass on the costs to consumers. However, for smallholders' and small traders' regulatory compliance eliminates the value added and either discourages economic activity or encourages informal trade.

The Tanzanian government has identified a wide range of constraints holding back investment and increasing productivity in agriculture,⁹ which must be addressed for Tanzania to realize the potential and opportunities for future growth. The government places liberalizing agricultural markets and increasing reliance on "the private sector as the engine of growth in crop production, processing, and marketing." Since the 2005 DTIS, the government has implemented major reforms aimed at reducing the role of commodity boards in marketing and has strengthened government institutions providing outreach and extension services, however, further reforms are required. The following sections look at this challenge in more detail focusing on export licenses, agricultural tariffs and taxes, regulatory policies governing the availability and prices of agricultural inputs, and the role of the TBS and the Tanzania Atomic Energy Authority in regulating imports and exports of agricultural products.

Despite regulatory bottlenecks and other constraints, Tanzania enjoys a large and growing agriculture trade surplus. Since the 2005 DTIS, officially recorded

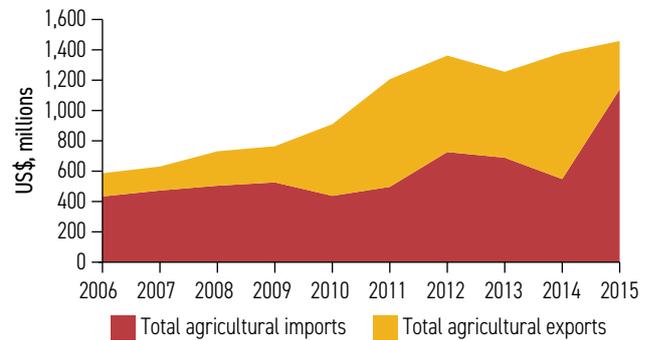
agriculture exports grew by 138 percent overall and by an average of 9 percent per year between 2006 and 2015 (see figure 5.1). Agriculture imports have also grown, yet Tanzania enjoys a much larger agriculture trade surplus now than at the start of the same period. In the years from 2006 to 2008, for instance, recorded agriculture imports equaled 63 percent of recorded exports whereas between 2013 and 2015, recorded agriculture imports stood at just 59 percent of recorded exports.

Agriculture accounts for nearly half of Tanzania's total merchandise exports. Figure 5.2 shows that agriculture and fisheries together accounted for 47 percent of total recorded merchandise exports between 2006 and 2015. From 2007 to 2012, agriculture's contribution to total exports fell by nearly 65 percent, but has since increased and now accounts for about 50 percent of total exports. While livestock production is focused on the domestic market, vegetables and nongrain cash crops are largely destined for export markets, both growing by 75 percent over the ten years to 2014. More than 75 percent of total output is produced by smallholders, with average farm sizes ranging between 0.2 and 2 hectares depending on the district.

Tanzania exports a diverse range of agriculture commodities to buyers around the world. As shown in table 5.1, Tanzania's traditional cash crops (tobacco, coffee, cashew, and cotton) along with fishery products continue to lead the way in agriculture accounting for 52 percent of total recorded agriculture exports from 2006 to 2015. In addition to these commodities, the country exports many other products, with sesame, dried legumes, groundnuts, and animal feeds having grown rapidly in recent years. India, China, and Japan are the largest export markets for higher-value cash crops while regional markets are important for food staples including sugar, rice, oilseeds, and fish. Virtually all cashew nuts are exported in unprocessed form to India and other countries in Asia where there are processing plants with spare capacity (in 2013, India and Vietnam accounted for 84 and 12 percent of cashew imports, respectively).¹⁰ China is the destination for more than 80 percent of sesame exports, while coffee is mainly destined for Japan and Italy, followed by Germany, United States, and Belgium.

Much of Tanzania's agriculture trade is unrecorded. Because of various regulatory barriers in Tanzania

FIGURE 5.1: Tanzania's Agriculture Trade Balance, 2006–15

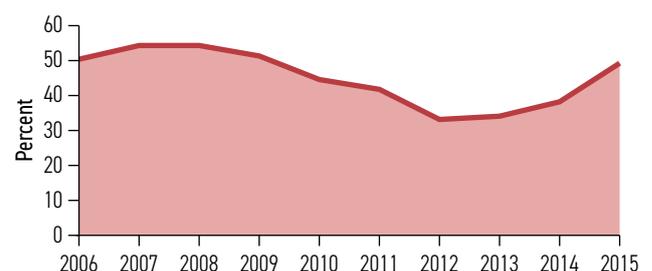


Source: Derived from United Nations Comtrade data.

including reliance on commodity specific export licenses and multiple registration and inspection requirements, much of Tanzania's agriculture production is exported through informal channels not captured in official trade records. Maize, for instance, ranks as the 20th most valuable agriculture export in table 5.1 with an average annual export value of just US\$5.3 million over the period covered. In January 2015, however, the East Africa Food Security and Nutrition Working Group reports that at least 500,000 tons of maize was exported from Tanzania to Kenya through informal channels in 2014.¹¹ Based on a conservative price of US\$300 per ton, these exports could easily have been worth more than US\$150 million placing maize as the seventh most valuable export in 2014 ahead of cotton and on a par with legumes and coffee. Similarly, live animals and meat products do not figure in the top 20 list of recorded agriculture exports due to challenges of export licensing and sanitary certification but are known to be important in informal export markets.

Regional markets are particularly important for poverty reduction. Regional markets in the EAC and other neighboring countries are very often served by small traders

FIGURE 5.2: Agriculture, Share of Merchandise Exports, 2006–15



Source: Derived from United Nations Comtrade data.

TABLE 5.1: Tanzania's Top 20 Agriculture Exports, 2006–15

Product description	2006 (US\$ million)	2007 (US\$ million)	2008 (US\$ million)	2009 (US\$ million)	2010 (US\$ million)	2011 (US\$ million)	2012 (US\$ million)	2013 (US\$ million)	2014 (US\$ million)	2015 (US\$ million)	Total, 2006–15 (US\$ million)	Share of total agriculture exports (%)
Tobacco	119.9	161.7	154.4	188.6	221.8	326.2	340.7	384.0	424.9	448.0	2,770.4	19.2
Fish/shellfish	187.6	218.0	221.4	168.2	167.6	174.8	172.5	151.5	190.6	156.3	1,808.5	12.5
Coffee	84.2	123.6	120.9	169.5	138.0	221.8	175.8	182.4	167.2	184.8	1,568.2	10.9
Cashew	65.5	56.8	96.3	94.3	146.6	134.5	175.7	188.0	207.2	319.2	1,484.1	10.3
Cotton	101.2	58.7	125.2	112.4	147.0	98.3	159.7	174.8	103.1	35.7	1,116.0	7.7
Sesame	23.7	30.4	53.9	77.0	80.2	88.6	118.7	180.8	241.8	191.1	1,086.1	7.5
Dried legumes	28.9	54.0	77.7	85.5	119.7	82.9	107.1	139.8	165.0	178.3	1,038.9	7.2
Spices	10.5	10.0	18.5	22.2	18.6	94.9	54.2	27.7	64.0	21.3	342.0	2.4
Animal feed	13.0	17.0	20.4	19.8	34.4	27.9	47.2	71.8	53.1	31.8	336.5	2.3
Tea	20.7	17.3	30.3	26.0	27.8	33.3	36.4	37.4	30.9	39.0	299.1	2.1
Cocoa	24.0	12.7	15.8	24.5	32.5	40.9	28.6	19.9	34.5	41.7	275.0	1.9
Edible oils and fat	7.5	10.9	22.9	19.0	24.7	35.1	36.8	22.0	27.0	17.2	223.1	1.5
Cut flowers/foilage	19.1	33.3	29.9	23.2	17.3	17.1	16.1	18.1	17.7	14.6	206.4	1.4
Sugar/sugar prep/honey	23.3	39.9	24.6	12.7	19.2	13.1	16.6	24.7	1.9	1.3	177.2	1.2
Rice	1.5	9.0	8.8	7.0	26.0	22.4	8.0	13.0	17.0	10.5	123.1	0.9
Seed/fruit/spores sowing	3.9	4.2	5.7	7.3	7.2	9.9	12.0	14.4	19.2	18.7	102.6	0.7
Hide/skin/fur, raw	9.5	10.4	10.2	3.4	3.7	10.2	8.9	4.4	4.6	3.2	68.4	0.5
Vegetables, fresh/chilled	6.5	3.8	5.0	4.0	5.1	4.3	5.7	10.1	10.7	9.3	64.6	0.4
Groundnuts	0.2	6.5	10.7	7.0	4.0	3.5	11.2	14.9	11.3	3.6	73.0	0.5
Maize	10.2	13.5	4.6	2.8	1.9	2.5	2.5	8.7	4.1	2.0	53.1	0.4
Total	761.1	892.0	1,057.3	1,074.5	1,243.4	1,442.1	1,534.4	1,688.4	1,795.6	1,727.6	13,216.3	91.5
Total agriculture exports	835.8	999.0	1,160.0	1,186.4	1,349.8	1,656.0	1,639.3	1,824.0	1,935.1	1,865.0	14,451.4	100.0
Share of top 20 exports (% of total agriculture exports)	91.1	89.2	91.1	90.6	32.1	87.1	93.6	92.6	92.8	92.6	91.5	

Source: Derived from United Nations Comtrade data.

with close links to smallholder farm communities. Many of these traders are women who use the revenue from trade to eke out a basic living for their family. They trade in regional markets because of attractive prices but are often blocked by Tanzania's regulatory framework so face many constraints and higher costs than if there were simple, risk-based systems in place to allow the use normal border channels. With both coffee and cloves, there has been widespread smuggling to markets in Uganda and Kenya respectively where prices are higher due to simpler and more streamlined regulatory procedures. A 2010 value chain study of Robusta coffee in Kagera, for instance, found that farmers just across the border in Rakai, Uganda, were earning considerably more from coffee than growers in Tanzania and were using the money to invest in new trees and other productive assets.¹² Tanzania meanwhile was working hard to enforce mandatory sales through the TCB sanctioned channels when there was a clear opportunity for poverty reduction by providing growers in Kagera legal access to this more lucrative foreign market.

Tanzania's agriculture is dominated by small-scale subsistence farmers. Over 80 percent of the arable land is used by smallholder farmers, and only about 1.5 million hectares is under medium- and large-scale farming. Smallholders operate on an average of 0.2 to 2 hectares of land depending on the district. Much of the country's livestock production is from traditional agropastoralists and around 8 percent of formally recorded fishery exports are of dried and smoked fish produced by artisanal fishers.¹³ Smallholders are major growers of maize, rice, Robusta coffee, cashew, pulses, and other leading exports. Cash crops including tea, sugarcane, Arabica coffee, tobacco, sisal, and some horticultural crops including cut flowers and fresh vegetables for export to Europe are produced by commercial farmers along with smallholders.

Women play an important role in Tanzania's agricultural sector. According to the 2014 Integrated Labor Force Survey, Tanzanian women account for almost 52 percent of the total population employed in agriculture: they

typically work as farmers “on own farm” or as “unpaid family helpers,” although in this latter role, they largely outnumber men by a proportion of more than 2:1 (NBS 2014). In addition, women are heavily involved in agricultural cross-border trade—evidence shows that they can represent up to 70–80 percent of the country’s total population of cross-border traders, of whom the majority regularly trade in agricultural and livestock products (along with other goods). Low agricultural productivity, poor agro-processing skills, limited availability of adequate machinery and equipment, restricted access to finance, markets and (price) information, high duties or levies, and cumbersome procedures tend to particularly affect women, thus often forcing them into subsistence-level production and informal trade, and preventing them from graduating into the formal economy and evolving into highly-productive, dynamic, profitable agricultural exporters.

Much of the agricultural produce in Tanzania is exported in raw or unprocessed form,¹⁴ and infrastructure and logistics constraints also reduces product freshness and lowers values. The 2011 TAFSIP prepared as an activity of the CAADP under the NEPAD identifies inadequate processing and value-addition facilities as a major constraint to growth.¹⁵ A dearth of storage facilities and incomplete cold chains prevent farmers and distributors from preserving freshness which also represents a foregone value-added opportunity. For instance, Tanzania produces around 2.75 million tons of

fruit per year but only 4 percent is processed with the result that much of the production spoils and goes to waste. Only around 10 percent of cashew nuts are processed domestically, and, despite growing oilseed production, Tanzania still imports most of the processed edible oil it consumes each year. Maize processing holds the largest share of small entrepreneurs, especially in rural areas. Some processing, such as oilseeds and cotton require large capital, hence, it is mainly dominated by large enterprises.

Agricultural productivity remains low despite the potential for significant expansion. As in much of Africa, increases in the value of agricultural production has primarily resulted from increasing the cultivated area and, to a lesser extent, from switching to higher value cash crops. To date, increasing yields have exerted a marginal impact on aggregate growth. Agricultural productivity remains low by international standards, while links to agro-industrial processing also remain modest. Low productivity results from many factors including trade barriers that delay or limit access to new types of inputs, raise the costs of crop production and marketing, and lead to uncertainty over price and basic market access.

Tanzania’s agriculture imports are dominated by edible oils, wheat, and sugar. As shown in table 5.2, edible oils, wheat, and sugar have together accounted for more than two-thirds of total agriculture imports between

TABLE 5.2: Tanzania's Top 10 Agriculture Imports, 2006–15

Product description	2006 (US\$ millions)	2007 (US\$ millions)	2008 (US\$ millions)	2009 (US\$ millions)	2010 (US\$ millions)	2011 (US\$ millions)	2012 (US\$ millions)	2013 (US\$ millions)	2014 (US\$ millions)	2015 (US\$ millions)	Total, 2006–15 (US\$ millions)	Share of total agriculture imports (%)
Edible oils and fat	228.5	274.3	223.1	130.8	212	319.8	296.5	233	427.1	258.8	2,603.9	28.4
Wheat	120.4	233.5	182	209.3	291.9	404.4	244.1	307.1	319.3	222	2,534.1	27.6
Sugar/sugar prep/honey	41.7	67.4	41.6	57	92.6	126.1	184.1	148	117.5	114.1	990.1	10.8
Maize	51.3	2.3	8.7	8.3	15.7	15.4	39.4	38.4	19.9	30	229.4	2.5
Tobacco	5.6	6.2	8.3	15	2.9	8.7	19	34.2	32	15.2	147.2	1.6
Rice	21.9	5	16.4	11.2	0.5	15.8	11.4	33.7	3	8.9	127.7	1.4
Dairy products and eggs	3.8	4.9	5.5	7.9	8.8	12.3	16.5	14.1	26.7	11	111.4	1.2
Flour or wheat	1	0.3	0.6	17.2	31.1	21.7	0.1	0.4	28.6	2.4	103.6	1.1
Fish/shellfish/etc.	1	2.3	3.9	4	4.6	3.4	3.4	9.4	18.1	17.4	67.6	0.7
Meat and preparations	2.1	0.6	3.3	4.8	4	8.4	7.9	8.5	15	8	62.7	0.7
Total	477.3	596.8	493.3	465.6	664	936.1	822.7	826.7	1,007.4	687.8	6,977.6	76.0
Total agriculture imports	582.3	739.6	692.2	640.4	867.3	1,192.5	1,130.4	1,070.7	1,334.0	928.8	9,178.2	100.0
Share of top 10 imports (% of total agriculture imports)	82	81	71	73	77	78	73	77	76	74	76	

Source: Derived from United Nations Comtrade data.

2006 and 2015. Wheat is mainly a temperate crop, so is only suited for production in certain locations, mainly on large commercial farms with irrigation capacity. Sugar also requires irrigation but is well-suited for production in Tanzania with its tropical and semi-tropical climate. In total, the country consumes about 420,000 tons of sugar per year, whereas domestic production stands at about 300,000 tons, leaving a 100,000-ton deficit to be made up by imports. The government imposed tight restrictions on sugar imports in mid-2016 with the aim of encouraging local producers to fill the gap.

Of the leading import categories, oilseeds likely offer the best potential for increased participation by smallholder farmers. Sunflower, soybeans, rapeseed, and other oil crops are reasonably straightforward to produce and have good potential for local processing into cooking oil with the cake used as an ingredient in stock feed. As with other commodities that have good potential for import substitution, however, problems in Tanzania with the slow release of new varieties of seed and other inputs makes rapid expansion difficult, and is an area of trade policy that should be addressed.

Agricultural Policy and Institutional Framework

This section is organized in six sections focusing on the requirements for obtaining export licenses, agricultural tariffs and taxes, agricultural inputs, standards and technical regulations, sanitary and phytosanitary measures, and the mandatory radiation testing.

Export Licenses

Export licenses are required for all major food crops (maize, rice, sugar) and are used to monitor and regulate trade in staple foods. The requirement to obtain a letter authorizing the export of food applies to virtually every commodity (TANEXA 2012). Government officials assert that the permit system is intended to promote food security and to monitor the quantity of staple foods. Food security is monitored through the MUCHALI system.¹⁶ If the assessments indicate that domestic food availability may be insufficient, this may trigger an increase in imports and/or a quota on food exports. It may also result in certain local government districts banning or restricting food exports from their locality thereby restricting the domestic movement of staple

foods as well as limiting exports. Delinking domestic food markets from regional and world markets creates price volatility and undermines the stated objective of promoting food security.

The process to obtain export permits remains cumbersome and effectively discriminates against smallholder farmers and small traders. The MALF is responsible for approving import and export permits. Each exporter is required to go through the steps outlined in box 5.3. In practice, this process is so cumbersome that it is ignored by most traders who choose to rely on secondary markets by paying a fee to the forwarding and clearing agents for a permit. The Tanzanian government has attempted to streamline the procedures and now allows a trader to apply directly to the MALF, although, actual practices have changed little as regional commissioners, and Clearing and Forwarding agents try to maintain their rent-seeking behavior. The procedures are particularly onerous, in many cases prohibitive, as traders

BOX 5.3: Procedures for Obtaining an Export Permit for Staple Foods

1. The Regional Commissioner Office requires a letter of validation, which must be issued by one designated officer.
2. Traders are then required to obtain a letter of validation from the Tanzania Revenue Authority (TRA), which is used to verify the Ministry of Agriculture, Livestock and Fisheries (MALF) permit at the border post.
3. Traders must obtain the export permit from the MALF in Dar es Salaam (not available anywhere else in Tanzania). Only one person in the MALF is authorized to sign permits—delays may occur.

Additionally, when exporting any agricultural product, the trader must show the following documents:

- Business license (issued by the local government authority),
- Import or export license (issued by the Ministry of Industry and Trade),
- Tax Clearance certificate (issued by the TRA),
- Tanzania Food and Drugs Authority certification of safety of food and drugs,
- Mark of Origin (issued by Tanzania Bureau of Standards [TBS]),
- Quality Standard Certification (issued by the TBS),
- Phytosanitary Certificate (required for raw agricultural produce issued by the MALF),
- Certificate of Radiation Analysis (issued by the Tanzania Atomic Energy Commission).

Source: Derived from information from the Tanzania Exporters Association, the Tanzania SERA project, and other sources.

in outlying districts have to travel to Dar es Salaam to obtain the permit. Only large traders have the capacity and economies of scale needed to comply with these requirements leaving local entrepreneurs shut out from business in their own country.

Obtaining the permit represents a challenge and is prohibitive for small- and medium-scale traders. Research conducted by the Tanzania Exporters Association found that 61 percent of respondents were negatively affected by the export permit issuing process (TANEXA 2012). Food export traders were required to go through five different steps to obtain a letter of authorization (TANEXA 2012; Amin and Stryker 2013). They were required to travel to the district, regional, and to the Ministry of Agriculture, Food Security and Cooperatives (MAFC) headquarters in Dar es Salaam for various procedures. The permit was issued in Dar es Salaam and this process took 2–4 weeks depending on where the exporter is based (TANEXA 2012). Such procedures have a particularly onerous impact on women for whom it is even more difficult to travel from their home location than for men and leave many rural Tanzanians trapped in poverty.

The export permit process should be simplified. In October 2014, the Tanzanian government allowed each region to issue export permits, however, the process was fraught with administrative difficulties and continued to be time consuming so was reversed after a few months. Currently the permit process remains with the MALF in Dar es Salaam with the objective of increasing efficiency and eliminating rent seeking behavior. Under the current system, traders are required to mail their application or travel to Dar es Salaam to obtain a permit. Traders are also expected to obtain a letter of validation from the TRA and the regional commissioner's office continues to require a letter of validation. Each of the steps not only make it difficult for poor individuals to play an active part in their own economy as traders, but also results in higher costs even for large traders, thereby taking away from the prices that can be paid to farmers.

All traders are also required to have a general export license. This license is required for all exporters by Tanzanian law, and must be renewed annually for approximately US\$300. For small traders who wish to export goods to neighboring countries, this can be a sizeable share of annual turnover and represents a

major hurdle. Furthermore, the license is only issued by the Ministry of Trade and Industry in Dar es Salaam. Given the size of the country, some traders from the north may have to travel over 1,000 kilometers to Dar es Salaam to obtain the license. Only larger traders bother to obtain an export license, smaller traders pay a fee to the license holder and uses their license to move the goods across the border.¹⁷

These high transaction costs effectively discriminate against small-scale traders obtaining an export license. While this is undoubtedly onerous, it is not clear how procedures are enforced, which makes the rules unpredictable and nontransparent and creates opportunities to elicit illegal payments. The export permit system has resulted in the trade being dominated by specialized clearing and forwarding agents who have the "know how" to obtain all letters of authorization to export food. They then allow traders to use them to export their foodstuffs for a fee (TANEXA 2012; Amin and Stryker 2013).

Tanzania's trade procedures result in smallholders receiving lower prices for their crops. The additional direct and indirect costs resulting from the export permit system are effectively added to the marketing costs, which are already high in Tanzania.¹⁸ Traders pass on any additional costs created by the Tanzanian permit system to the farmers. Tanzania exports maize to Kenya, which is a significant importer from both the region and global markets. For Tanzania to export, their products must be competitive in the Kenyan market—this limits the ability of the traders to pass on the increased marketing costs. This will shift the burden of the higher marketing costs (and any other costs) on to the Tanzanian farmer by offering a lower purchase price. The existing permit system effectively reduces farmers' living standards and does not contribute to food security.

Export regulations also increased the cost of exporting for traditional exporters. Box 5.4 outlines how existing regulations impact the export of coffee.

Agricultural Tariffs and Taxes

The EAC Common External Tariff (CET) for most agricultural inputs is zero, while agricultural crops, which are produced in Tanzania, have been protected. Cane or beet sugar and chemically pure sucrose in solid form

BOX 5.4: Limitations on Export Marketing: The Example of Coffee

The Tanzania Coffee Board (TCB) is responsible for regulating the sector and for managing the export market auctions. In principle, farmer groups may sell directly to external buyers, however, they are required to obtain an export permit, which is issued by the TCB. The export permit is issued after the TCB have verified the quality of the coffee (must be classified as premium grade) and the offer price should be above the auction price. Farmers who bypass the TCB marketing are still required to pay "voluntary" deductions to the Coffee Development Fund (CDF) for farmer development and coffee research, and the district levy (which ranges from 0-5 percent, according to district). Buyers are also responsible for paying US\$0.1 per kilogram to the CDF. Direct exporters are required to pay an additional Export Permit Fee of US\$5 per ton. Obtaining the export permit takes approximately seven days.

The TCB is responsible for issuing 14 different licenses, including approved export warehouses and coffee curing plants. The marketing regulations result in the Tanzanian farmer receiving a lower price relative to the price in neighboring Uganda. There is considerable evidence that Tanzanian farmers export coffee unofficially to Uganda. Currently, Tanzania is allocating scarce government resources aimed at reducing unofficial coffee exports rather than streamlining its own marketing system and allocating resources to improving productivity in the coffee sector.

attract a CET of 35 to 100 percent. Importation of sugar for industrial use attracts 100 percent CET to encourage use of locally or EAC-produced sugar for industrial use. Rice attracts a CET of 75 percent and dairy 60 percent. The dependence on high tariffs to promote priority agricultural sectors does not encourage increased competitiveness. Protecting local markets creates a bias against competing in export markets and does not encourage productivity enhancing investments.

The CET for imported palm oil is low to meet domestic demand since both local production and production throughout the EAC remains low. However, imported rice is charged 75 percent to protect local producers from the competition of efficient producers in Pakistan, Vietnam, and so on. Similarly, imported processed maize flour is charged at 25 percent to promote and protect the milling industry in the EAC. The dairy industry is protected with a high tariff of 60 percent. Products in which Tanzania has a comparative advantage, such as cashew nuts, coffee, tea, and tobacco, all have a tariff of 25 percent. Imposing tariffs on these competitive

TABLE 5.3: Tanzania's Agriculture Common External Tariff

Product	Common external tariff
Milk (powder or solid)	60
Cashew nuts	25
Coffee	25
Tea	25
Maize (corn seed)	25
Rice or paddy (in the husk)	75
Raw cane sugar	35
Sugar (and sugar for industrial use)	100
Tobacco	25
Fertilizer	0
Cotton	0
Cotton (sewing thread)	25
Agricultural machinery	0
Tractors	0

Source: Derived from World Integrated Trade Solution.

sectors serves to discourage agro-industrial expansion and diversification by increasing the input costs, although this is mitigated by the EAC and SADC preferences whereby many inputs and agricultural commodities, including maize, rice, and others, can be imported duty free.

The EAC aims to simplify cross-border trade for small traders through adopting the Simplified Trade Regime (STR). The STR may be utilized by all traders crossing borders with less than US\$2,000 of goods. This has the potential to significantly benefit many small cross-border traders, however, surveys indicate a very low utilization rate. Box 5.5 provides more detail. It is recommended that the border agencies (TRA and others) publicize the STR.

Export Taxes on Agricultural Products

Export taxes are levied on a very small number of products with the aim of encouraging their use in downstream processing in domestic industries. Export taxes are levied on raw hides and skins at 60 percent of the free on board (FOB) value or T Sh 600 per kilogram, whichever is higher, and raw cashew nuts are taxed at 10 percent of the FOB value or US\$160 per ton, whichever is higher.

District Cess Taxes

Local government authorities (LGAs) levy a tax on agricultural products shipped from their area. This levy, known as a cess, is collected on all bags that are moved,

BOX 5.5: The EAC Simplified Trade Regime

When the East African Community (EAC) Customs Union Protocol entered into effect, internal tariffs and import duties on EAC-originated goods were eliminated in partner states. Whilst the provision offers clear opportunities for boosting Tanzania's intra-EAC trade, including in agricultural and livestock products, fulfilling the conditions to benefit from such preferential treatment can be challenging for smallholder farmers and small-scale agricultural traders, especially women—particularly in relationship to meeting the EAC rules of origin, producing a valid single-entry document and, where necessary, paying for the services of a clearing agent.

In response to those challenges, and with the aim of facilitating the intra-EAC movement of goods often traded at small-scale level, a Simplified Trade Regime (STR) has been introduced as part of the EAC Customs Union. The scheme provides for a simplified clearance procedure for consignments (a) that originated within the EAC, (b) of commercial value not more than US\$2,000, and (c) included in an official list of eligible products (of which most are agricultural and livestock commodities). Farmers and traders who meet those basic requirements are entitled to clear their goods free of import duties through the EAC Simplified Certificate of Origin. This, in turn, is a simplified version of the single-entry document, typically issued by customs authorities at the border, which should be simple enough for any small-scale trader to fill without the assistance of a clearing agent.

While the aim of the STR is noble, and is likely to have contributed to increasing small-scale trade within the EAC, including in agricultural

and livestock products, awareness on the benefits of the regime tend to be low among intended beneficiaries. Enforcement by border officials can also be intermittent and problematic.

For instance, a series of field surveys conducted by the Eastern African Sub-Regional Support Initiative for the Advancement of Women in 2012 with women cross-border traders at selected EAC borders, including Mutukula (Tanzania and Uganda) and Namanga (Tanzania and Kenya), showed that more than half (and sometimes up to three quarters) of survey participants were not aware of the STR, or the preferential treatment available under the EAC Customs Union. More than 80 percent of women at Mutukula indicated they were still being charged duty by customs officers.

While lack of awareness tends to be high among small-scale traders, and can induce them to avoid the formal border and use bush crossing routes even for goods that would not attract duties, officials can also exhibit poor knowledge of existing trade regimes—or, in some cases, deliberately refuse to apply them to extort illicit payments from traders. Extensive sensitization among both traders and officials, and regular monitoring of the enforcement of trade facilitation measures on the ground, becomes, therefore, of paramount importance to fully exploit the export and growth opportunities available within the EAC, including for small-scale agricultural traders, especially women.

regardless of whether the maize is sold or transported from the area. If a farmer or trader moves the maize from one town to another, they must pay the tax on each bag. If the maize is moved to another region in Tanzania, the tax doubles to around US\$1.50 per bag (see box 5.6). In practice, many farmers seek to evade the cess, and, with limited enforcement capacity, evasion is widespread. Widespread evasion also encourages corruption with officials extorting payments from farmers in return for “looking the other way.”

Cess taxes represent a major source of income for LGAs. Nyange and Tschirley (2014) found that twelve LGAs rely on produce cess for more than 50 percent of their own local revenue. Their reduction or removal is likely to directly impact their ability to deliver services to their constituencies. The Tanzanian government has committed to removing the cess, however, in the short run, this is unlikely because most districts depend on the revenue from the cess for their social services. In the short run, the Tanzanian government's reforms focus on increasing collection efficiency through utilizing

BOX 5.6: Local Taxes and Levies: The Case of Maize in Southern Tanzania

Local traders in the Kasanga area are required to pay a tax on “moving” maize, which discourages trade with Zambia. The district government in Mtai levies a tax (US\$0.70 per bag) on local traders for moving maize for all purposes. The levy is collected on all bags regardless of whether the maize is sold or transported from the area. If a farmer or trader moves maize from one town to another, they must pay the tax on each bag. If the maize is moved to another region in Tanzania, the tax doubles to around US\$1.50 per bag. When they take several bags to sell and do not sell everything they must camp overnight or pay the moving tax again to take the crop back to their farm. Each time they return to the market to sell the maize they are taxed. This adds to the urgency of a quick sale thereby depressing prices for already poor farmers. One trader reported paying the moving tax three times per bag until he finally sold the product for a loss.

digital and mobile payments. The government could also improve efficiency by introducing a uniform cess for each LGA. This will eliminate market distortions between districts.

Agricultural Inputs—Regulatory Environment

Tanzania's competitiveness in agriculture trade starts with the farmers' access to productive inputs, including seeds, fertilizers, pesticides, and farm machineries. As in other areas of the economy, regulations governing trade in agricultural inputs in Tanzania are cumbersome.

These procedures slow farmers' access to new varieties of seeds and agrichemicals help raise productivity. Although testing procedures for fertilizer have now been eased, until recently, every single combination of NPK fertilizer and supplemental micronutrient required a minimum of three years of domestic field trials at multiple test sites before it could be sold to farmers, although the nutrients required by the crops is a well-understood area of agriculture science and it is not necessary to test whether different combinations of nutrients will be effective in Tanzania or in any other country. There is also little need to test new varieties of seeds or agrichemicals that are already known good performers in neighboring countries and have scientific data from these and other places to show how they would perform in Tanzania. After much dialogue, Tanzania, Kenya, and Uganda agreed in the early 2000s to accept new varieties of seeds approved in any one of the other two countries after one season of domestic field trials, but so far, only seven varieties of potato have been registered in Tanzania through this arrangement.

Seeds

Tanzania has made good progress in allowing private sector participation in seed trade. Compared with many African countries where restrictions on variety ownership and multiplication remain in place, Tanzania allows the private sector to participate in seed production and marketing. Approximately 25 percent of seeds were provided by the formal sector in 2013.¹⁹ The Seed Act (2003) allows qualified private firms to produce, import, and sell registered varieties of seeds in Tanzania and there are now several large and small seed companies operating in the country. Through the Seed Act, private firms are permitted to maintain their own varieties, thereby leaving the state-operated Agriculture Seed Agency (ASA) to provide breeder material for public varieties including varieties developed by national and international research institutes.

Many small seed companies rely on foundation material produced by ASA. While large international

seed companies maintain their own varieties, breeder material produced by the ASA is widely used by smaller domestic companies. Firms say that the quality of the ASA foundation material is usually good, but sometimes complain that the supply is not regular, making it difficult to plan business operations. According to the Tanzania Seed Trade Association (TASTA), another important issue is that the ASA has so far declined to grant individual companies exclusive rights to the varieties it maintains. In TASTA's view, exclusivity is needed for successful commercialization of public varieties—first, so the firm has a reason to invest in marketing the variety, and, second, so there is a strong incentive to ensure multiplication is done correctly. This argument makes good sense. The International Maize and Wheat Improvement Center has awarded exclusive rights in Tanzania for some of its varieties, and TASTA has been calling on the ASA to do the same since 2011.

Most private seed companies are focused on the production and marketing of maize hybrids. Not only is maize the most widely grown crop in Tanzania, but because maize hybrids are ill-suited to recycling, seed companies dealing in this product are more likely to enjoy a steady flow of repeat customers compared with other crops and varieties. For maize, therefore, TASTA is generally bullish and reports much higher adoption rates of hybrids and open-pollinated varieties (OPVs) now than in the early 2000s. According to sector experts, the entire national market for improved maize seed, including hybrids and OPVs, is around 8,000 tons now, against just 1,000 tons in early 2000s. Nevertheless, to put this in perspective, 8,000 tons of improved-maize seed is only enough to plant about 320,000 hectares, which is less than 8 percent of the 4.2 million total hectares given to this crop each year. Most farmers therefore have no choice other than to rely on self-saved seed or uncertified seed bought in local markets. Commercial seed sales may have grown overall, but distribution networks are thin and patchy outside the major production centers. For other important smallholder crops, including rice, oilseeds, pulses, and legumes, adoption rates remain very low in all areas, with few new varieties or other kinds of improved seed available anywhere in the country.

Despite the strategic importance of improved seed, the government continues to levy value-added tax (VAT) on this input while some district authorities charge

cess. These taxes persist despite recommendations by the President's Office Regional Administration, Local Government (PORALG) and private sector for seeds to be exempted from tax. The MALF and the TASTA developed recommendations for improved tax treatment of seeds and seed packaging materials that were presented to the Ministry of Finance in April 2014. These recommendations were: (1) to exempt all types of seed packaging material including jute bags, plastic bags, and paper bags from VAT, import duties, and excise taxes; (2) to exempt seeds from local crop produce cess; and (3) to make seeds VAT exempt because of being an agricultural input. These recommendations were not implemented. The office of the Prime Minister and the PORALG issued a circular to all local government authorities to exempt seeds from crop cess, yet, at the time of data collection, several district authorities were continuing to levy cess. Moreover, the proposal to remove VAT and cess on seed packaging materials was not approved in the 2016 finance bill. Hence, VAT at 18 percent continues to be levied on seeds and seed packaging materials. Packaging materials are also subject to an excise duty of 50 percent. Whereas, some district authorities do not charge cess on seed packaging materials, others charge 3–5 percent cess.

Seed companies have also complained about the structure of costs for seed labels. All commercially marketed seeds in Tanzania are required to bear an official label issued by the TOSCI. The seed firms maintain this has helped to combat the problem of counterfeit seeds and have welcomed recent reductions in the price of the seed label, however, they also identified an important problem in that there is no distinction in the price of labels for hybrid seeds (where the marketing margins are large) and OPV seeds (where the margins are thin). The TASTA and others identified the label requirements as a disincentive to produce and market OPVs despite the strategic benefit of these seeds to poor farmers, who can neither afford to buy new seeds each year nor the fertilizer needed to make the expenditure on hybrids worthwhile. Furthermore, the TASTA explained that the price of a seed label is fixed regardless of the size of the seed pack, which increases the costs disproportionately for farmers who buy seeds in small quantities. According to the TASTA, the labeling policy has so far only been enforced for maize seeds even though all seed types of seeds are meant to bear an official TOSCI label.

Cumbersome procedures for introducing a new variety introduction are another important constraint to the seed sector and agriculture growth and poverty reduction, more generally. As explained by the TOSCI, testing and registration of a new variety of seed requires a minimum of five seasons testing, including two seasons of farmer preference trials, two seasons of "DUS" testing to ensure the variety is distinct (D), uniform (U), and stable (S), and one season of national performance tests. The rules vary for different species of plants, but each set of trials must normally be conducted in four to five distinct locations under the supervision of authorized seed scientists. Once all the tests are complete, a technical committee must meet to study the results and make a recommendation to the National Variety Release Committee (NVRC) whether to approve the variety. The technical committee and the NVRC are expected to meet twice a year, but this is not always possible due to a shortage of funds, which delays the release of new varieties. Multiplying the seed for commercial sale can only begin after the NVRC has formally approved the registration. Depending on the crop, multiplication can take a further three to four seasons before the variety is available to farmers.

The variety release process could be streamlined and this would contribute to increasing farmer incomes. Apart from the requirement for farmer preference trials, which is somewhat unusual and slows the process by two seasons, the requirements for DUS testing and national performance trials are comparable to those in many other countries. Many other countries, particularly in Africa, however, also have problems with slow access to new varieties, and the fact that other countries also require many tests does not necessarily make this the best solution for Tanzania. While it is reasonable to accept that governments have a responsibility to ensure the varieties of seed sold to farmers are known good performers, this condition can be satisfied through other more streamlined procedures. The United States, for instance, does not require registration trials and, in South Africa, variety registration is automatic after only one season of DUS tests. Another good example is Turkey, which relaxed controls on variety registration in 1982 by deciding to accept test results from private seed companies. Within five years, the cumulative number of maize hybrids available to farmers increased four-fold and, by 1992, average per hectare maize yields were 1.4 tons above prereform trends, adding an estimated

US\$97 million per year to agriculture value added (Gisselquist and Pray 1999). Similarly, in Bangladesh, automatic acceptance of new varieties from India helped raise average maize yields from less than one ton per hectare in 1991 before the reforms to more than six tons per hectare from 2010 thereby adding an estimated \$125 million per year to farmer incomes (Harun-Ar-Rashid, 2012). Tanzania has the potential to reap substantial gains in productivity and farmer incomes from streamlining its variety release procedures.

Tanzania has been working towards the adoption of regionally harmonized seed rules aimed at improving the seed trade. Since at least the late 1980s, Tanzania has participated in several regional initiatives aimed at harmonizing the procedures for variety release and seed certification. These include efforts launched through the Association for Strengthening Agricultural Research in Eastern and Central Africa, the EAC, and the SADC. Despite good progress in agreeing on regional standards for variety testing and certification, and for the establishment of regional variety catalogs and regional seed certificates, implementation of these agreements has been slow to take off. At least as early as 2009, Tanzania agreed with Kenya and Uganda to accept new varieties registered in either one of these two countries after just one season of domestic trials. To date, however, only seven varieties of potato seed have been accepted in Tanzania through this arrangement.²⁰ Varieties of other major crops including maize, groundnuts, rice, sorghum, pigeon peas, and others, continue to be put through the full set of farmer preference trials, DUS tests, and national performance tests even when the variety is a known good performer in a neighboring country.²¹ Harmonization of trade rules is by nature a slow process, not only because of depending on regional neighbors to reform, but also because of having to build new systems to implement the regional standards and amend domestic legislation to conform to regional agreements.

Limited capacity to implement advanced seed standards constrains agricultural productivity. Despite Tanzania's national seed lab being a nonaccredited member of the International Seed Testing Association for many years, and recent upgrades aimed at achieving full international accreditation to facilitate seed exports, limited capacity to monitor quality in domestic markets remains an important constraint. Compared

with developing advanced labs to enable seed exports, investing in systems that support even basic improvements to domestic seed supply is arguably more important for a country with low productivity and occasional food security concerns. Beyond the problem of limited funds to pay for meetings of the National Performance Trial Technical Committee and the NVRC, as discussed earlier, resources for inspection of seed plots required by Tanzania's own seed legislation and regional harmonization agreements is extremely limited. In the Arusha zone, which is a major area for seed production, there are just four seed inspectors, five junior inspectors, and one vehicle. Full certification of maize seed requires the seed plot to be visited at least three times at very specific and narrow stages in the growing season so is extremely challenging under the best of circumstances. Even in the EU, this is only made practical by allowing private inspectors to work under official supervision. In Tanzania, such provisions do not exist. On top of their field inspection duties, Tanzanian seed inspectors are also meant to undertake market surveillance work to prevent counterfeit seeds from being sold to farmers. Both the TASTA and the TOSCI reported this to be a widespread problem in Tanzania.

As in other areas of trade policy, achieving meaningful improvement in seed supply requires greater use of simple, risk-based approaches to regulation and enforcement. Adopting simplified procedures for known good performing varieties from neighboring countries would be an effective way of accelerating farmer access to improved technology. Another approach would be to allow private companies to certify their own seeds for domestic sale.²² Tanzania could also make wider use of other less time consuming and resource intensive requirements for seed certification such as the Quality Declared Seed (QDS) standards developed by FAO. Tanzania already permits village seed groups to produce and sell QDS in local markets. QDS is still produced according to set standards, but demands fewer inspections, thus making this system a practical way to alleviate pressure on the TOSCI while still achieving an acceptable level of quality assurance. Current regulations in Tanzania, however, only allow QDS to be sold in the immediate farm area. The SADC seed regulations, which Tanzania has ascribed to, allow for international trade of QDS for both emergency and commercial purposes, but Tanzania regulations do not. According to the TOSCI, the purpose of QDS in Tanzania is to improve

seed trade at the village level only and not on a wider scale. If QDS is truthfully labeled as QDS, however, farmers know what they are getting no matter whether they buy the seed in a village, district, or even national or international market, and it is a more reliable choice than buying seed from unknown sources without any labeling or certification. Allowing QDS to be more widely available would also permit village seed producer groups the opportunity to grow their enterprise into larger seed businesses thereby creating a possible route out of poverty for rural Tanzanians.

Fertilizer

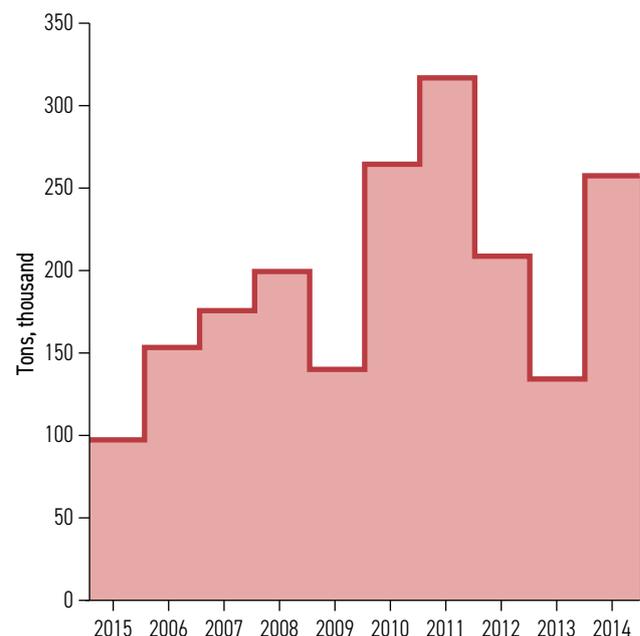
Fertilizer use in Tanzania remains low at approximately 9 kilograms per hectare. To put this in context, the annual nutrient depletion rate of soil nutrients was estimated at 41 kilograms per hectare for nitrogen, 4 kilograms per hectare for phosphorus, and 31 kilograms per hectare for potassium (MALF 2007). Although 9 kilograms per hectare is a substantial improvement from the average of 5.5 kilogram per hectare from 2005–09 (IFDC 2012), it is far below the level required to maintain soil fertility.²³ Less than 7 percent of the planted area uses inorganic fertilizer and much remains to be done to encourage use of this important input. The low use of fertilizer is frequently explained as resulting from a combination of high prices and supply constraints.

The introduction of subsidized inputs in fiscal 2010 increased fertilizer use. As shown in figure 5.3, fertilizer use in Tanzania has risen significantly since the 2005 DTIS was prepared but has been volatile with large annual swings, particularly in recent years. About 80 percent of the fertilizer in Tanzania is used to grow maize, tobacco, and rice. Traditional export crops, such as cotton, tea, tobacco, and coffee, also use fertilizer. In large part, the upsurge in fertilizer use from 2009 can be attributed to the introduction of the National Agricultural Input Voucher Scheme (NAIVS). The NAIVS aimed to increase maize yields, crop diversification, and food security to households. Eligibility is restricted to farmers registered as a farmers' organization. In 2014, the NAIVS was modified to become the Electronic Smart Subsidies in Agriculture (ESSA), which enables farmers to acquire specific inputs to the value of the e-voucher at approximately half the market price. The reentry of private sector suppliers (for example, Yara) has contributed to ensuring quality fertilizer is readily available.

Most fertilizers are imported. Currently, there are 20 importers. The three dominant importers are Yara, Export Trading Group, and Premium Agro-Chem, which together account for more than 70 percent of total fertilizer imports to Tanzania. Urea, diammonium phosphate (DAP), and NPK granular compounds account for 84 percent of all fertilizer products used in the country (IFDC 2012). Local production at the Minjingu phosphate deposit, southwest of Arusha, is modest, but sustains the manufacture of organic hyper-phosphate for the domestic and local market. There are no economically viable deposits of potassium in Tanzania.

In May 2016, Tanzania announced plans to build a US\$3-billion fertilizer factory in partnership with private investors. According to a statement from the President's Office, "the factory will use natural gas to manufacture fertilizer and will be built in joint venture with a group of investors from Germany, Denmark, and Pakistan" (Ng'wanakilala 2016). According to the statement, the plant will be built in southern Tanzania near big offshore gas finds and is expected to be commissioned in 2020. Natural gas is one of the hydrocarbon sources of Ammonia, a key ingredient of nitrogenous fertilizer. The official statement notes that, once built, the plant would become the largest in Africa with the capacity of producing 3,800 tons of ammonium nitrate per day while employing up to 5,000.

FIGURE 5.3: Fertilizer Use in Tanzania, 2005–14



Source: Derived from FAOStat (accessed April 20, 2017).

To be profitable at such a large scale, Tanzania must develop regional and other export markets. With an expected production capacity of 3,800 tons per day, total production at the new plant would be nearly seven times more than total national consumption of all fertilizer types at present. Although there is good potential (and much need) to grow the domestic market for fertilizer, recovery of the US\$3 billion investment requires steady production and steady sales at far higher levels than Tanzania can realistically sustain. Presently, however, Tanzania's own fertilizer standards are not aligned with global standards or standards in neighboring EAC countries. Fertilizer manufacturers and blenders in Kenya and Uganda have alleged that these differences are used by Tanzania for protectionist purposes. With such perceptions, EAC countries and others may naturally resist opening their markets to exports from Tanzania at a time when market development and regional integration should be a high strategic priority.

Although progress has been made in simplifying trade procedures, registration requirements still limit private competition and product choice. All types of fertilizer in Tanzania are required to be registered by the TFRA. Until recently, product registration by each importer, including every new combination of NPK, required three seasons of domestic field trials at a cost of US\$10,000 per season. This policy effectively blocked custom blending of fertilizer based on soil analysis (that is, "precision farming"), and forced one regional firm that hoped to develop this business model in Tanzania out of the market. Testing requirements have since been eased through new regulations drafted in 2011 whereby only "new products" (described by the TFRA to mean organic fertilizer and foliar fertilizers, though others have cited different definitions) require three seasons of field tests and can be reduced to just one season if the product has been registered in another EAC country. While this is a significant improvement on the old system, and TFRA says it is implementing the new regulations, the TFRA also notes that the minister has yet to sign the 2011 regulations into legal effect. This situation causes considerable uncertainty for private operators who rightly question which set of rules to follow. Even under the new guidelines for reduced testing, one large firm said that when it proposed to import with added sulfur it was required to submit the product for field trials even though there is abundant scientific evidence to show

that sulfur is beneficial to crop growth and is commonly added to urea in other countries.

The unfavorable regulatory environment increases total costs. Fertilizer importers in Tanzania face very demanding standards that raise prices unnecessarily and make trade with regional neighbors difficult. These requirements limit competition and make it difficult for new entrants to come into the market. There are no harmonized standards for fertilizer in the EAC, and, in at least two important areas, Tanzania's own fertilizer standards are more demanding than standards in other EAC countries and even more demanding than global fertilizer standards.

Unnecessarily demanding mandatory standards increases costs. The technical regulations governing moisture content are a good example. The international standard for moisture in fertilizer is around 1.5 percent depending on the product, but in Tanzania the moisture limit is pegged at 1 percent for all products. Authorities at the TFRA say this is because Dar es Salaam is humid so it is necessary to have very low moisture content at the time of import. Many other countries and port cities around the world, however, also have a hot humid climate and use the global standard. Private operators say that caking (the main risk of moisture in fertilizer) does not happen until moisture is well above 1.5 percent. Moreover, importers say the best way to comply with Tanzania's demanding requirement is to import product in prepacked bags since humidity can easily drift above 1 percent if offloaded in bulk. Prepacked fertilizer is more expensive to ship and more difficult to handle than bulk fertilizer. From this perspective, Tanzania's own trade requirements contribute to increasing total costs.²⁴

Tanzania's standards on heavy metal contamination are also inconsistent with global practice. Cadmium, for instance, is commonly found in DAP fertilizer for which the international standard is set at a limit of 20 parts per million. In Tanzania, however, the limit is fixed at just 7 parts per million. The TFRA informed the DTIS team that Tanzania has adopted international standards for heavy metal contamination yet private importers were adamant this is not the case and pointed to the case of cadmium as one clear example. Like the standard for moisture, Tanzania's more restrictive heavy metal limits is another cause of high prices. To meet the local

requirement, firms must place special orders for DAP for Tanzania's strict specification and test it to a much higher standard than for most other markets around the world.

Tanzania's tight standards discourage local blending—an effective strategy keeping fertilizer prices down. Most fertilizers contain less than 45 percent active ingredient with the rest being inert filler. Not all filler is “optional” because of how elemental N, P, and K exist in their natural state, but maybe 10–30 percent inert filler could be added locally through domestic blending. This is important since inland transportation easily accounts for 40–60 percent of the retail price of fertilizer and 10–30 percent of this cost could be saved by blending product around the country using local clay and other inert material as filler. In the United States, nearly all fertilizer is made this way. Unfortunately, with almost zero tolerance for any kind of nutrient defect or foreign material contamination, domestic blending is not a practical business model for Tanzania.

As the DTIS was being finalized, new plans for a bulk procurement system (BPS) were announced. With the stated objective of achieving improved economies of scale at the import stage to save costs, new regulations for the bulk procurement of fertilizer were announced on February 10, 2017, and published in the Government Gazette on February 17, 2017. Private sector operators say there was little or no consultation before the BPS was announced and that the system is likely to stifle competition and have very negative impact on the fertilizer businesses. The government has asserted that the prices charged by private sector are “too high” and claim the BPS will help improve transparency and keep prices down.

The BPS is modeled on the system for importing petroleum to Tanzania. Under the BPS, prequalified firms will submit tender proposals to import the entire national supply of selected fertilizer products based on the pooled demand of all distributors and agro-dealers. The chosen importer for each product will be selected by a tender committee. Potential importers, distributors, and agro-dealers must meet the set criteria to participate in the system. Distributors are required to mobilize finance to pay the importer for their share of the consignment in advance. Failure to pay the importer on time or to comply with other prescribed

procedures will attract large minimum fines and other heavy penalties. Based on the tendered price, estimated transport costs, and allowed markup, the Fertilizer Bulk Procurement Authority and the TFRA will set maximum wholesale and retail prices at different locations in the country.²⁵

The BPS will introduce new business risks which could have a negative impact on fertilizer supply. Rather than achieve cost savings to bring prices down, the new system creates many business risks and could lead some firms to curtail rural distribution resulting in more limited availability, less choice, and higher prices to farmers. Especially that the new policy was announced abruptly and with little consultation, there is a high risk of disrupting existing supply networks and increasing food insecurity. Private competition is critical for a fertilizer market to be efficient, yet BPS favors large firms and imposes heavy penalties that are likely to discourage small enterprises from participating in this business. Prepaying for pooled imports far in advance also carries a huge financial risk that is made worse by heavy penalties for noncompliance. Unlike petroleum, fertilizer demand is seasonal and can change abruptly depending weather patterns.

Policy priority should focus on addressing constraints that increase costs of importing and distributing fertilizer. Large firms already import fertilizer in large consignments, which limits the scope for further price reductions through centralized (bulk) procurement. At the same time, and as noted earlier, there are many regulatory factors in Tanzania that discourage competition and lead to high costs. These include tighter tolerance limits on moisture content, nutrient defect, and heavy metal contamination. These are all examples of regulations that directly lead to higher prices. These regulations raise import prices and also discourage domestic blending, which in turn prevents significant savings on transport costs from being realized. With transport accounting for 40–60 percent of the price of fertilizer delivered to the farm this is a significant cost. The current regulations risk making AN and other fertilizer exports from Tanzania uncompetitive. Addressing the underlying causes of high prices promises to effectively reduce prices, which will improve availability, increase total nutrient use, augment productivity, and raise rural incomes across a wider range of small and low-income farmers.

Agrichemicals

The procedures for registering new kinds of agrichemicals is unnecessarily cumbersome. Insecticides, herbicides, fungicides, and other chemicals are widely used by the horticulture industry and other major crops including tobacco and cotton. Chemicals are not widely used in maize production in Tanzania but are used during storage to prevent insect infestation. The Tanzania Pesticide Research Institute (TPRI) is responsible for approving all types of agrichemicals. To be registered, the TPRI performs multiyear and multilocal field trials that last from one to three full calendar years, depending on the product. These tests aim to determine whether the product performs according to the manufacturer's specification. Only domestic test data supplied by the TPRI may be used to make this evaluation. Even if the product is a known good performer in another country with a similar climate, it must be tested domestically by the TPRI.

Approval of test results can be a lengthy process. Once all field trials are complete and the data have been analyzed, a technical report is sent to the Pesticide Approval and Registration Technical Subcommittee (PARTS) for review. Based on the outcome of this review, the PARTS submits a recommendation to the National Plant Protection Advisory Committee (NPPAC) on whether the product should be registered and granted admission to Tanzania. The NPPAC makes the final decision on registration. Both committees are meant to meet twice a year but the TPRI says this is not always possible due to a shortage of funds. Money for product registration is paid by the applicant, but these proceeds go to the general government account and not to the TPRI. There is also, on occasion, insufficient funding for field trials, which lengthens the testing and registration process. Test data are not shared with the registrant who is eventually provided a letter from the NPPAC that only states whether the product was accepted or rejected.

Once a product is approved, import procedures are demanding and expensive. Importing a registered agrichemical to Tanzania requires the importer to declare how much product they expect to bring in over a six-month period and to obtain an import permit for each consignment. To obtain the import permit, the importer must provide the TPRI a proforma invoice, pay a 0.5 percent cess, and a US\$125 inspection fee for every three tons. At the border, a TPRI inspector may

examine the product and draw samples for analysis by the TPRI lab in Arusha. While the product is being analyzed, the importer must hold the cargo in a bonded warehouse to ensure it is not sold to the public before analysis is complete.

There are onerous procedures for product registration and border approvals and testing, but limited attention and resources allocated to market surveillance. Like seed and fertilizer, counterfeiting and adulteration of agrichemicals can happen at any stage in the supply chain before the product reaches the end user. According to the TPRI, there are eight authorized inspectors to cover the entire country who travel on a seasonal basis. The last prosecution for selling counterfeit products was in 2011. To improve inspection capacity, the TPRI told the DTIS team that they had asked the MALF to allow all TPRI scientists (many of whom spend considerable time in the field with spare days during registration trials) to be allowed to perform market surveillance work. This proposal, it seems, was never answered.

There are many practical and low-cost opportunities to improve farmer access to agrichemicals, enhance quality control, and reduce prices. Like seed, Tanzania could expedite the acceptance of new agrichemicals with little risk or danger by accepting international test data. There is little reason to perform field trials on every new product when the product is widely used elsewhere and scientific data from credible sources already exist to show whether it is safe and effective. Redirecting resources that are currently used for repetitive and largely unnecessary field trials to more productive purposes, such as market surveillance work, could also be highly beneficial with significant impact on farmer confidence and willingness to invest in these products.

Agricultural Spare Parts, Equipment, and Machinery

Many key agricultural inputs do not benefit from the blanket exemption from VAT. The Finance Act 2012 waived VAT on irrigation equipment, tractors, farm implements (including spare parts), and milk processing products. However, the waiver was inadequately communicated and implemented by the TRA. The VAT Act 2014, which took effect on July 1, 2015, exempted agricultural implements (such as tractors, harrows, spades, forks) and inputs (for example, fertilizers, pesticides, and insecticides), implements for fisheries and bee-keeping and dairy equipment.²⁶ Farmer and agribusiness

representatives and others have, however, raised concerns about the completeness of the list of inputs that qualified for exemption in this act. Agriculture nonstate actors have indicated that the list does not include several key agriculture inputs including irrigation and water harvesting equipment, rice processing equipment, special planting material tools including plastic bags and seed trays, milk processing supplies and equipment, and many other packaging and planting materials.

Agricultural mechanization is a priority, but progress remains slow, the list of tax exemption inputs requires updating. The first phase of the ASDP, from 2003 to 2015, prioritized agricultural mechanization to increase production and trade competitiveness. Different programs were established to facilitate farmers to acquire machineries. At the district level, farmers acquired farm machinery (for example, tractors and power tillers) through District Agriculture Development Plans. At the national level, the Agricultural Inputs Trust Fund (AGITF) was established. The AGITF is a government financial institution which was established to provide low interest rate loans for farm inputs including machineries (Lyimo 2011; PASS Trust 2013). The total number of tractors used across the country increased from 7,210 in fiscal 2006 to 10,283 in 2015 (statistics from the mechanization department of the MAFC).

The Finance Bill 2016 addressed some of the previous concerns, but continues to exclude key agricultural equipment. The finance bill of 2016 proposed adding: machinery used for agricultural, horticultural or forestry (except lawn mower or sports ground rollers and parts); and harvesting or threshing machinery. However, proposals by nonstate actors for exception for some other key agriculture equipment are yet to be considered. Examples of some of those pending proposals includes adding to the exclusion list plant protection substances, storage, postharvest and cooling facilities, and agro-nets, as well as spare parts for technologies (that is, greenhouse and irrigation, and so on); and applying tax exemption on other agricultural equipment (dam liners, pipes for irrigation, and so on).

Standards and Technical Regulations

Many mandatory technical regulations should be amended to become voluntary standards. The TBS has made all standards in agriculture into mandatory technical regulations on health grounds. Mandatory technical

regulations should be restricted to specific traits impacting public health and safety and security. Including all standards at mandatory regulations creates additional work, increases compliance costs, and leaves less resources for the TBS to focus on higher risk products.

The National Standardization System is administered by the TBS. The TBS is responsible for formulating national standards and technical regulations. Once approved, technical regulations are published in the official Government Gazette and become compulsory. By conflating national standards as compulsory technical regulations the TBS ends up regulating many product attributes that should not be mandatory, including the size and shape of grains. Tanzanian standards and technical regulations are generally adapted from international standards, and mainly cover food and agriculture, chemicals, textiles and leather, engineering, the environment, and general techniques.

Mandatory technical regulations should be readily and freely available. The TBS sells the standards, which, in effect, are only available from their Head Office in Dar es Salaam. Like any law, all mandatory technical regulations should be publicly available at no cost to the consumer. Further, there are considerable overlapping responsibilities between the TBS and the TFDA—both regulate the same products. This adds to the time and resources required for obtaining approval to register even very basic food products and release crop inputs. Overall, the existing national quality infrastructure imposes unnecessary costs on producers through over regulation, which adds to trade costs, undermines competitiveness, and effectively crowds out small traders from participating in the formal sector.

The requirement for Preexport Verification of Conformity (PVoC) imposes increased costs on exporters with no improvement in market access. The TBS requires certain products to obtain PVoC prior to exporting from Tanzania. All products subject to PVoC must obtain a certificate of conformity (CoC), issued by an authorized PVoC service provider in the country of export prior to shipment. The CoC confirms that the products comply with the relevant Tanzanian technical regulations or approved equivalent international or regional standards. The PVoC procedure applies to products subject to technical regulations, which includes used textiles, toys, furniture, safety equipment,

and electrical products. Given the absence of international accreditation for testing by the TBS, the PVoC requirement increases costs for a redundant test as most international importing markets will require the products to be retested.

The TFDA provides testing services for 37 mandatory food safety parameters for cereal grains. The total published cost on the TFDA website for testing all 37 parameters is US\$2,105, which is equal to the value of about seven tons of maize and greater than the US\$2,000 limit on STR transactions, effectively barring small traders from participating in this business, legally.

Sanitary and Phytosanitary Measures

SPS measures seek to protect human, animal, and plant health from pests and diseases, and additives or contaminants in foods and beverages. SPS measures are included in the food safety standards enforced by the government, and the various biosecurity controls enforced at all border entry points aimed at keeping out pests and diseases. The World Trade Organization's (WTO) SPS Agreement only addresses SPS measures that provide for the control of traded food and plant and animal products, it is mutually exclusive with the WTO Agreement on Technical Barriers to Trade. This can result in the same product having to comply with multiple regulatory agencies. For example, while maximum pesticide residue levels are an SPS matter, nutritional value requirements are not and represent an area for possible technical regulation instead. Food safety and quality issues thus require extensive inter-agency cooperation between multiple regulatory agencies.

Tanzania's food safety regime is fragmented, costly, and ineffective. The TBS administers the technical regulations relating to food quality, and the TFDA is responsible for all the safety and health issues. In practice, however, many TBS standards cover health and safety issues, such as the maximum level of mycotoxins allowed in maize. This regulatory overlap results in suppliers having to comply with two sets of requirements, make payments to both for multiple test results. The 2011 Confederation of Tanzania Industries study on food safety regime identified 11 regulatory authorities responsible for more than 20 pieces of legislation (CTI 2011). The onerous compliance costs (estimated at more than US\$15 million) resulted in higher prices to consumers as firms passed on the increased cost of

doing business. This reduces Tanzania's competitiveness within the EAC and the global market, while resulting in higher prices for foodstuffs for all Tanzanians.

Lake Victoria fisheries is a good example of how SPS issues can be addressed successfully. In 1996, Tanzania experienced SPS restrictions with the EU ban on fish exports due to concerns over cholera and pesticide residues. Faced with the potential collapse of the fishing sector around Lake Victoria, the government and the private sector, with financial and technical support from the EU, implemented wide ranging reforms, which successfully addressed the food safety issues and resulted in the ban being lifted in 1998. However, following concerns over fish poisoning with pesticide the ban was reimposed from April 1990 to January 2000. Once market access was threatened, Tanzania implemented the reforms and investments necessary for achieving compliance with buyer demand more rapidly than either Kenya or Uganda. The solution focused on certifying export-oriented firms and processors. This focus on meeting buyer demands for those firms exporting to the EU met buyer demands and did not require compliance with EU standards for the whole industry.

The livestock sector has the potential for significant growth and value addition with improved animal health and animal disease management. Tanzania has 25 million cattle, the third-largest herd in Africa, and a relatively large population of sheep and goats. The bulk of Tanzania's livestock may be divided between smallholders and pastoralists. More than half of all households keep livestock, however, only one percent would be classified as livestock farmers. With demand for meat expected to triple by 2030, the Government of Tanzania Livestock Modernization Initiative (2015) considers the sector represents an attractive investment opportunity for meat production, dairy products, and leather. Tanzania is a net importer of dairy, beef, pork, poultry, meat, and eggs. The sector is characterized by low growth rates, high mortality (from disease), low reproductive rates, and poor quality of the final products. Further, there is a shortage of modern slaughter capacity with many of the existing facilities representing a health risk. The 2010 National Livestock Sector Development Strategy identified three series of strategic interventions aimed at addressing key constraints holding back investment and growth. These include controlling livestock diseases and improving public

health, strengthening support services (veterinary, disease surveillance, preparedness, and control measures, and improving the incentives (business-enabling environment) for private investment along the livestock value chain.

Strengthening animal-based SPS management would help increase commercial livestock farming and livestock productivity. Currently, there is limited commercial livestock farming with the bulk of the meat and milk consumed in rural areas being traded through informal and unregulated channels. Tanzania experiences several transboundary diseases on the World Organization for Animal Health's list A. Improved control measures and improved access to veterinary services will be required before Tanzania can obtain official access to regional, and some international markets, for its livestock and livestock products. In addition to strengthening animal-based SPS management, improvements are required in the marketing system to ensure more efficient price transmission.

Livestock import and export regulations need to be streamlined. The import and export of live animals and meat products is regulated by the Tanzania Meat Board (TMB). All businesses importing and exporting live animals and meat products are required to be registered with the TRA and the TMB. Export and import procedures are available on-line, which also notes that "some of the conditions are subject to amendment or cancellation by the Director of Veterinary Service or other competent authorities (boards, the TFDA) at any time and without prior notice being given." There are no references to the criteria that must be met for taking action "without prior notice." The TMB Clearance Certificates for each imported meat consignment are 2 percent of the FOB value plus US\$1 per kilogram of meat for a veterinary license. Prior to each shipment, the importer is required to pay for a survey and sampling to test for lead and salmonella in an International Organization for Standardization-approved laboratory, and submit the results to the TBS. The TBS will issue a Certificate of Conformity against the sampling results. Once the shipment arrives, the importer has to submit a sample to the Atomic Energy Authority who will test for radiation. The goods will only be cleared for sale after receiving the clearance from the Atomic Energy Authority. To date, the atomic energy authority has not rejected one agricultural consignment. Increasing investment and

commercialization in the livestock requires the existing SPS framework to be simplified and streamlined.

Strengthening food safety is necessary for increasing links between agriculture and tourism. The growing tourism sector has the potential to generate significant backward links to the horticulture, livestock, poultry, and fisheries sectors. Poor quality and irregular supply limit the links. Specific SPS constraints identified include a lack of training on good hygiene practices, weak surveillance and monitoring system, and weak inspectorate capacities.

Radiation Testing for Agriculture and Foodstuff Imports and Exports

The Tanzania Atomic Energy Commission (TAEC) requires all imported agricultural and food products to be screened prior to issuing the Radioactivity Analysis Certificate, which is required before the goods can be released into Tanzania. The TAEC, established in 2003, is responsible for promoting nuclear technology for economic development and for regulating radioactivity contamination in foodstuffs. The TAEC has one laboratory in Arusha and a facility for screening in Dar es Salaam.

BOX 5.7: Obtaining a Radioactivity Analysis Certificate

Prior to shipment, the trader has to send a sample to the Tanzanian Atomic Energy Commission (TAEC) to obtain prior approval. However, prescreening is only available at the Dar es Salaam and Namanga border points. If the product is perishable, the trader may bring the sample directly to the border where the TAEC will use a "quick detection facility."

The fees for testing are: for imports below T Sh 10 million, a flat fee of T Sh 35,000; for values from T Sh 10 million to T Sh 1 billion, the fee is 0.4 percent of the free-on-board value; and for larger than T Sh 1 billion values, a flat fee of T Sh 4 million.

Exports are tested at 50 percent of the import rates. Although many export markets require a Radioactivity Analysis Certificate (RAC), the TAEC laboratory is not accredited internationally so the exports must be retested on entry (for example, to Japan). The TAEC has a monopoly on testing, no private internationally-accredited company is allowed to issue the Tanzanian RAC.

The TAEC takes between 20–50 samples each day, and issues between 400–1,000 certificates per month. The screening of perishables takes 2–3 hours in Arusha and 1 day in Dar es Salaam.

Since the introduction of the compulsory testing, the TAEC has had no positive test results.

The absence of risk assessment increases costs and reduces the focus on high-risk consignments. Compulsory radiation testing increases costs and diverts resources from addressing higher potential risks. The testing of all food imports for radioactivity increases trade costs, creates a demand for increased testing and laboratory facilities, and takes scarce resources away from addressing potentially higher risks. The blanket testing policy does not distinguish those originating from low-risk areas or those that had previously been tested. The mandatory testing appears to serve no public policy objective other than to raise revenue towards funding the salaries of the TAEC. Since testing is required for a batch of imports, this requirement discriminates against small traders who have to pay a flat fee of approximately US\$17.50 on any value up to US\$500. In practice, this encourages evasion, and there is evidence that even medium and large traders offload a truck at the border and send the goods across informally before reloading on the other side.

Selected Agricultural Sectors: Growth and Structural Change

This section presents a brief overview of the major trends in maize, rice, sugar, and cashew production and fisheries. Maize and rice are the main staple food crops in Tanzania grown by smallholders for both household consumption and sale in the market. Both rice and sugar receive high levels of trade protection as the Tanzanian government seeks to encourage self-sufficiency. Fisheries remains an important subsector and provides a livelihood for several million people. While each sector experiences specific constraints, it is apparent that the cross-cutting value chains issues addressed in the previous section are central to increasing investment and productivity in agriculture and expanding links with manufacturing. Realizing the objectives set down in FYDP II and the TAFSIP requires improvements in the policy and regulatory environment.

While not comprehensive these subsectors constitute the main source of income for more than half of the rural population and for the poorest two-thirds of the population. Addressing constraints to increasing productivity in these subsectors would contribute to reducing poverty in the rural areas. Fisheries represents an important growth sector around the

inland lakes where more than a third of the total population reside and is also a significant potential source of income for Zanzibar.

Maize

Maize is primarily grown by smallholders as both a household staple and cash crop. More than 4.5 million households (80 percent of the total crop growing households) reported selling maize. In 2016, smallholders produced 85 percent of the total maize crop of 6.7 million metric tons (MALFD 2016). Over the past decade, maize yields averaged 1.3 tons per hectare, this is 20 percent less than the average for Sub-Saharan Africa and 2.8 times lower than the world average. Recent aggregate increases in maize production have largely resulted from expanding area under production rather than increasing yields. Maize production continues to be dependent on rainfall, with most smallholders using recycled seeds and little fertilizer.

Despite low productivity, Tanzania remains a large producer and has the potential to sell into regional markets. Due to the abundance of fertile land and large number of farmers growing maize, Tanzania is well placed to supply this staple food to Kenya, which has a structural deficit. Tanzania's official maize exports rarely exceed 3 percent of total production (less than 100,000 tons per year) and could increase significantly without being a threat to domestic food security.

The government has a record of introducing export bans at short notice. Between 2002 and 2014, Tanzania imposed five exports bans. The first two bans spanned between January 2004 to January 2007, except for a brief three-month period at the beginning of 2006. A five-month export ban was put in place in 2008, and a ban, which lasted almost two years, was in effect during 2009 and 2010. The duration of the last ban during this period lacked transparency. It was announced in March 2011, but only became effective in July and, in October, it was announced it would be removed, yet it was only ended in December 2011. The export bans (with exception of the ban in 2002) were introduced at times of high maize prices in neighboring countries and removed when prices were low. This is consistent with the government imposing export bans in response to food security concerns caused by production shortfalls or price increases (USAID Feed the Future Initiative 2014), but this also means that farmers with

a surplus are unable to benefit from trade and, in turn, disincentives other farmers from working to grow a surplus in the future.²⁷

Even when there was a ban in place, export trade persists, albeit with much lower profit margins for Tanzania. Mirror trade data between Kenya and Tanzania show large volumes of maize are exported from Tanzania even when there is an official ban. Some maize may stay in the country because of the ban, but the border is simply too porous and the demand in Kenya is too strong to stop all exports. When there is a ban in place, therefore, Tanzanian farmers and traders say they are forced to accept low prices due to the market risks. Kenyan importers, however, say their profits surge when Tanzania imposes a ban because of being able to use the risk as a reason for paying Tanzanian farmers and local aggregators less.

Export bans are rarely effective at stopping exports yet increases seasonal price variability by depressing prices at harvest and limiting the seasonal price increase prior to the next harvest. Analysis of the 2011 export ban shows it had a larger impact on maize prices than the previous export bans causing maize prices to be 8.8 percent lower for every month that the ban was in effect than without the ban. The analysis also showed that while the effect of the ban was relatively muted in the Southern Zone, all the other five zones experienced an impact that was large and significant (USAID Feed the Future Initiative 2014). Lower maize prices may be popular with urban consumers in the short run, but ultimately discourage production, harming them in the long run. Bans also reduces rural incomes and work against rural poverty reduction (as noted, over 70 percent of the population reside in the rural areas where poverty is much deeper and more pervasive compared with urban areas).

The threat of export bans is an important constraint to growth. History matters. The use of export bans on maize and other strategic commodities since the 1980s to try to ensure domestic food security has continued to influence investment decisions even after the bans were lifted. While there are numerous studies showing that export bans fail to increase food security and always result in much lower prices for farmers,²⁸ the government has persisted with this policy. An export ban is usually imposed with immediate effect. This

causes market uncertainty and makes it difficult, if not impossible, for traders to negotiate forward contracts with growers and international buyers. The most recent export ban on maize was introduced in 2014, which was lifted on September 9, 2016, although consultations reveal that during late 2015, a new ban was announced before lifting the previous one. Consultations further reveal that maize traders were not given prior notice of the ban, and that those already holding export permits were not allowed to use the permits since the ban was with immediate effect. Some traders argue that they were not informed of the ban, and, subsequently, incurred losses due to their prenegotiated export contracts.

The threat of future export restrictions is sufficient to discourage investment by small farmers and traders. Periodic export bans and uncertainty over the possible reimposition of export restrictions are a major disincentive to increasing maize production. Ad hoc bans cause significant market uncertainty for private sector traders and ultimately make them less responsive to future opportunities for trade and investment. This discourages investment in fertilizer, improved seeds, and the uncertain supply further discourages investment in storage facilities (warehouses). The inability to sell in neighboring markets suppresses the income of a large number of smallholders who are prevented from obtaining higher price.

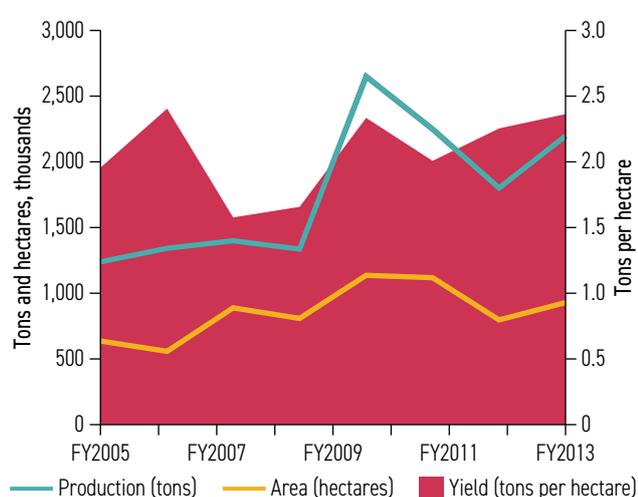
Insufficient and low-quality grain storage continue to serve as a constraint to efficient maize marketing. Despite some recent private investments in storage and expansion of the warehouse receipts system, lack of adequate storage facilities and marketing opportunities remains a major feature of Tanzanian agriculture. Postharvest losses of up to 30–40 percent in some rural areas continue to be reported (Suleiman and Rosentrater 2015). Weaknesses in storage and handling also result in increased health risks from aflatoxin in the processed flour from maize, wheat, and cassava. Studies by the TFDA have documented levels of aflatoxins in maize that exceed the recommended maximum limits by the TBS (TFDA and Abt 2012). With increasing attention given to aflatoxin through mandatory EAC standards, poor handling and lack of storage is a fundamental constraint to Tanzania's ability to compete with global suppliers in regional markets.

Rice

After maize, rice is the second most important cereal crop in Tanzania. Many types of farmers grow rice. Medium and large farmers typically produce rice for market sale, while small farmers grow primarily for their own consumption. Figure 5.4 shows the main trends in rice production, area, and yields over the period 2005–13. Rice production is a major source of employment, and income for many farming households (NBS 2007/08). The National Agricultural Sample Census of 2002/03 reported that 42 percent of rice production is marketed, with medium- and large-scale farmers accounting for 87 percent (Minot 2010).²⁹ In the agricultural census,³⁰ rice was the second most widely grown cereal crop after maize in terms of production area. Rice is grown by many smallholder farmers using traditional seed varieties. Rice is grown in three main ecosystems (SAGCOT 2010): rain fed lowlands (68 percent): average productivity 3.5 tons per hectare; rain fed uplands (20 percent): average productivity 1.2 tons per hectare; and irrigated rice cultivation (12 percent): average productivity 3.8 tons per hectare.

Tanzania has a long history of donor-sponsored investment in irrigation systems for rice. Most irrigated plots are part of small, village-level schemes; however, some are part of large-scale schemes that were formerly state-managed farms (Minot 2010). Nearly half of the country's rice production is concentrated in the regions of Morogoro, Shinyanga, Tabora, Mwanza, and Mbeya. The top four rice-producing regions are in the northern part of the country (Maro and Witwer 2014).

FIGURE 5.4: Rice Production, Area, and Yields, FY2005–13



Source: Tanzanian Ministry of Agriculture, Livestock and Fisheries Development

Owing to its strategic importance, rice was among the three commodities included in the BRN initiative, launched by President Kikwete. Under this initiative, production was expected to increase by 290,000 tons (Maro and Witwer 2014). Three sites were earmarked by the SAGCOT for rice production promotion; Ngalima site with 5,126 hectares, Kihansi site with 5,200 hectares, Mkulanzi site with 63,000 hectares. The priority on increasing rice production under the BRN was consistent with the vision of the 2009 National Rice Development Strategy (NRDS), developed as a component of ASDP 2013 and the Tanzania Development Vision 2025, which sought to commercialize subsistence production. The NRDS identified improving irrigation and water harvesting technology as major strategic thrusts.

Rice is one of the top five commodities in intraregional EAC trade. Consumption of rice in the EAC grew at an average rate of 4 percent per year over the ten-year period to 2012, and according to analysis by Kilimo Trust (2014), rice consumption is projected to continue to grow in the foreseeable future. Rising per capita incomes and rapid urbanization in recent years have resulted in a substantial increase in annual per capita rice consumption by nearly 20 percent to about 25–30 kilograms per year (Kilimo Trust 2014). This growth in per capita rice consumption has stimulated both domestic production and the trade in rice.

There are good prospects for increased rice production and trade in the EAC. Tanzania is the largest consumer of rice in the EAC, with annual consumption standing at approximately 1.18 million tons, or nearly 65 percent of total EAC production. Kenya is the second-largest consumer at 370,000 tons annually, and is structurally deficit in the commodity with local production estimated to be only around 125,000 tons (or just 33 percent of total consumption needs), providing a good opportunity for Tanzania to export to a nearby market (Short and others 2012).

The EAC market represents a significant opportunity for Tanzania to increase rice exports. Currently, only 3 percent of the rice imported into Kenya comes from Tanzania. Formal sector figures show that Tanzania exports 27,000–37,000 tons annually to other EAC countries and 17,000–25,000 tons to other African countries, including Malawi, the Democratic Republic of Congo, South Sudan, and Zambia. This is equivalent to 3.5

percent of total EAC rice consumption. On top of these volumes, informal trade is considerable because traders seek to circumvent burdensome trade procedures that prevent them from trading officially. Most of Tanzania's rice imports come from Far East Asia.³¹

The EAC continues to rely on high tariff protection for rice rather than focusing on increasing competitiveness through lowering input costs. In 2015, the EAC increased the CET on imported rice to 75 percent or US\$200 per metric ton. This was a policy reversal from Tanzania's prior tariff of 15 percent and represented a return to the high levels of protection applied by the EAC from 2005 to 2011 (see box 5.8). While these tariffs may provide temporary relief to local producers, they do little (or nothing) to address underlying competitiveness constraints and may even serve to forestall the kind of improvements Tanzania needs to realize its full potential in this commodity and become a major regional exporter. The slow introduction of new varieties of rice seed and regulations that prevent fertilizer companies from marketing fertilizer types specifically tailored to the crop and individual soil types are good examples of self-made regulatory barriers to increased production and expanded export trade.

Through 2005 and 2011, high tariffs on rice enabled large-scale traders, who could obtain import rebate permits, to capture large rents as they can import rice at world prices which can then be sold into a protected market. This undermined the stated intent of protecting smallholders who, with low productivity, were unable to compete with the imported rice. Following the decision of the Tanzanian government to reduce rice tariffs

in 2013 from 35 percent to 15 percent, local producers and rice stakeholders (Rice Council of Tanzania) lobbied for the EAC CET to be increased to 75 percent on infant industry grounds.³² Low productivity resulting from using outdated seeds and expensive and insufficient fertilizer undoubtedly constrains the ability of Tanzania's rice producers to be internationally competitive. However, applying a high tariff does not address the root cause of the high input costs while failing to "protect" producers from widespread exemptions and trade diversion via Zanzibar. Further, a tariff increases the price of a basic staple and has an adverse impact on the lowest income groups.

Sugar

Tanzania has the potential to expand sugar production. Tanzania has the right geographical conditions for growing sugar yet does not grow enough to meet domestic demand and imports more than US\$100 million of sugar per year (see table 5.4). During preparation of the DTIS update, the government announced tight restrictions on sugar imports with the aim of stimulating increased local production and achieving self-sufficiency by 2020. The stated aim is to promote local production by levying high tariffs and quantitative restrictions on imports. Tariffs and quantitative restrictions increase the price of sugar, a basic staple, in the domestic market. They also allow the sugar industry to realize higher prices thereby minimizing the incentives to address underlying structural constraints that hinder long-term competitiveness gains.

Between 1998 and 2001, the total area under sugar cane cultivation expanded rapidly following the privatization of sugar processing companies. There are currently four milling companies in Tanzania (Kilombero Sugar Company, Mtibwa Sugar Estates, Tanganyika Planting Company, and Kagera Sugar). The government has 25 percent equity in Kilombero Sugar Company and Tanganyika Planting Company, which are majority owned by Illovo, a subsidiary of Associated British

BOX 5.8: Tanzania Rice Tariffs Fluctuating from 2005 to 2015

From 2005 to 2011, the East African Community (EAC) applied a tariff level of 75 percent to promote import substitution. The earlier high tariff levels had increased prices in the protected market, and the large gap between international prices and prices in the EAC encouraged substantial lobbying to import under rebate. Further, Zanzibar applied a much lower tariff (12.5 percent) and the Tanzanian government granted import rebates. In 2013, Tanzania reduced the tariff on rice from 35 to 15 percent, which continued the move away from the earlier EAC policy of high tariff protection aimed to promote increase production. In 2015, the EAC increased rice tariffs to 75 percent.

Source: Derived from Barreiro-Hurle (2012) and project interviews.

TABLE 5.4: Tanzania Sugar Imports and Exports, US\$ million, 2013–14

	2013	2014
Imports	132.8	96.6
Exports	95.3	61.4

Source: Derived from United Nations Comtrade data.
Note: The harmonized system code for sugar is 1701.

Foods, and Alteo from Mauritius. Super Group, a Tanzanian firm owns Mtibwa Sugar Estates and Kagera Sugar. Taken together, therefore, the sugar industry is concentrated in the hands of a very few owners. Kilombero Sugar is the largest miller accounting for half of total cane processed. These four companies in aggregate can produce approximately half of the total domestic demand of 600,000 tons (420,000 raw sugar for domestic consumption and 170,000 for industrial use).

The sugar milling industry continues to be protected by high tariffs. The Sugar Board of Tanzania's (SBT) new strategy aims to support the mills to increase productivity. The government justifies the 100 percent tariff on imported sugar as necessary for the sector to develop yet this has been the strategy for the past decade. It would be useful to identify the bottlenecks and develop an action plan aimed at increasing the industry's competitiveness. There is considerable opportunity for the existing mills to improve their productivity to move towards international best practice. Increased competitiveness would enable tariffs to be reduced without increasing imports. As production area expands, there have been reports of declining sucrose levels in the sugar cane reaching the factory, which hurts the cane grower for whom price is linked to the percentage sucrose. Ideally, sugar cane must be processed within 30 minutes of cutting to prevent natural sucrose depletion. Despite these basic economics of the industry, the Sugar Board has so far resisted licensing second mills within an 80-kilometer radius of an existing mill. Inefficiencies in the milling industry along with the political influence of the millers have thus enabled these firms to pass on the high processing costs to consumers with little competition or pressure to undertake much needed investments.

The SBT continues to act as a single channel for export marketing and sets quotas for imports. Through an agreement with the EU, sugar has been exported to the EU at higher prices than those prevailing in the EAC. The SBT licenses sugar exporters and requires the export price to exceed the import price, they also prescribe the maximum quantity of sugar that can be exported, after considering domestic production and demand. The SBT specifies the maximum amount of sugar that "needs" to be imported during a 12-month period and licenses and registers all importers. There are 3 categories of importer: Category A large importers (more than 60 metric tons) for domestic consumption, Category B large

importers for industrial use, and Category C less than 5 metric tons.

Existing policies have raised prices for consumers, undermined the stated incentives for sugar producers, and created incentives for large traders to capture windfall rents from importing under rebate and selling into a protected market. The policies of the Tanzanian government confuse the incentives and interests facing producers and consumers. High tariff protection reduces the incentive for producers to improve their productivity (efficiency) as they can sell at higher prices into both the EU market and the domestic market, however, the price in the domestic market is uncertain as the government permits imports under rebate. Sugar is permitted to be imported through the Dar es Salaam port with a license which waives the duty. In January 2013, the MALF issued licenses for 35,000 tons of sugar yet later allowed 85,000 tons to be imported impacting on the price. Large traders aim to maximize the price at which they sell into the domestic market and have resorted to withholding sugar in warehouses to drive up prices. Consumer complaints of sugar shortages have occurred periodically over the past decade. The combination of high consumer prices and the large rents being made by large scale importers in conjunction with a nontransparent process for allocating import quotas by the SBT has contributed to the decision by the Tanzanian government (in early 2016) to directly import sugar to meet the shortfall in supply.

Reducing the tariff on sugar and liberalizing the market for sugar would encourage efficiency, promote growth, and benefit consumers. A FAO (2012) report on incentives and disincentives in the sugar sector recommended liberalizing the sugar trade and reducing the tariff. With large numbers of people dependent on sugar growing and processing for their livelihood, it is essential that regulatory reforms, including tariff reductions, be closely related to increasing efficiency and competitiveness. Committing to more open and transparent policies at the regional level (EAC) or multilaterally at the WTO level will contribute to preserving existing jobs while encouraging increased investment and expansion of the sector.

Cashew

Tanzania is a leading producer of cashew nuts, with exports accounting for 10 percent of the global trade.

Cashew is primarily grown by an estimated 300,000 smallholders in the coastal areas. Tanzania is one of the largest producers of cashew nuts in Africa and with world demand growing the sector has the potential to increase exports significantly. Virtually all production is exported in raw unshelled form for processing to India, Vietnam, and Brazil, with less than 10 percent being processed in Tanzania. With raw cashews selling for approximately US\$1 per kilogram, compared to US\$6 per kilogram for processed nuts, the government has sought to encourage increased value added and processing in Tanzania. Approximately 150,000 tons of cashew nuts are exported each year.

Cashew marketing and exports are controlled by the Cashewnut Board of Tanzania (CBT), a statutory monopoly, which regulates and promotes the quality, marketing, and export of raw and processed nuts. Fitzpatrick (2012) characterized the cashew industry as low productivity and low value added. The government subsidizes inputs (seedlings, fertilizer), however, these are distributed through local governments and primary cooperative societies and often arrive late and in insufficient quantities. The costs of transporting cashew nuts from the farm gate to licensed warehouses under the CBT's warehouse receipt system and then on to the ports for export are high and further reduce farmer income.

The CBT introduced the Warehouse Receipt System in 2007. Fitzpatrick (2012), in a consultancy for the Agricultural Non State Actors Forum, concluded that single-channel marketing through the CBT works to reduce profits for smallholders growing cashew. A recent paper by Akyoo and Mpenda (2014) is less critical of the WRS, although still notes that high transaction costs associated with "cooperative monopolies" negatively impacts farmer profits. The authors placed the structural and institutional weaknesses on "clandestine buyer collusion and predatory pricing at the expense of local processing." It was envisaged that the WRS would increase competition between processors and enable farmers to obtain improved prices. However, the requirement for producers to use the CBT WRS has inhibited competition. Further, although private traders have the right to participate in the WRS, Fitzpatrick notes that local cooperatives and domestic political interests sought to limit private participation. This sometimes results in farmers choosing to sell for cash

at lower prices on the informal market. Large cashew farmers expressed concern over the reliability of CBT grading and noted their inability to obtain compensation when products are wrongly classified.

The main constraints holding back further development of the cashew sector stem from its existing structure and regulation. While the auction system may have helped increase competition between buyers at the point of sale, regulations governing cooperatives serve to undermine the incentives for investing in domestic processing. The operation of the auction system results in processors competing for raw materials at the same time as the peak demand from Indian processor. The requirement that all cashew nuts must be sold via the cooperative union and auction system increases transaction costs and prevents farmers and farmer groups from developing commercial relationships, including outgrower arrangements along the supply chain. Under this regulatory framework any new processor would be unable to guarantee the supply of raw cashews.

The net price received by cashew farmers is reduced by relatively high taxes, high cooperative operating costs, and high export margins deducted by traders. The farmer receives between 67–80 percent of the auction sale price, however, when the cost of shipping the cashews from the warehouse to the port is included, the return declines to 57–65 percent of the auction sale price. Cashew farmers pay approximately 15 percent to the cooperatives and logistics firms.

The unique market structure of the cashew sector requires more work before concluding on the efficiency of the cooperatives. A more detailed assessment is required before drawing conclusions on the efficiency of the charges levied by the cooperative and logistics firms, as the cashew sector has several characteristics which have the potential to drive down prices to the farmer. Firstly, the international cashew market has been plagued by collusion which would also serve to reduce prices to farmers. Further, the existence of many small-scale producers will reduce prices to farmers as aggregators have to cover their costs and, thirdly, high internal transport costs will also drive down farm-gate prices, as will a lack of awareness of grading by the farmers.

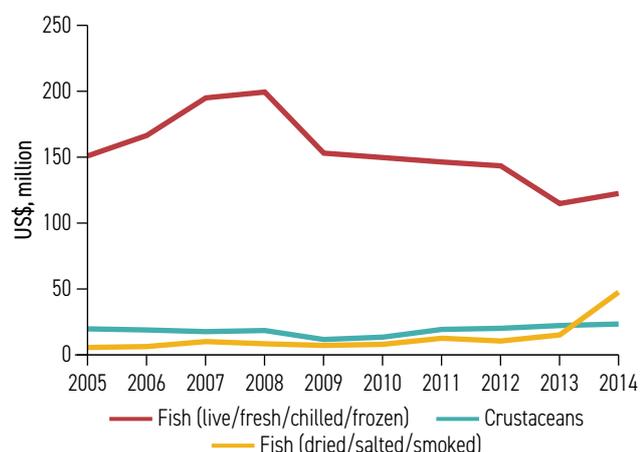
The export tax on raw cashews has the unintended effect of lowering prices to smallholders, and the existing marketing regulations and the compulsory use of the WRS serve to reduce the incentives for investing in processing facilities. The Tanzanian government introduced an export tax in 1998 at 3 percent of the FOB price, in 2005, this was increased to 10 percent with 6.5 percent earmarked for inputs and research and development, and, in 2011, it was further increased to 15 percent, with the aim of encouraging more investment in domestic processing.

Fisheries

The fisheries sector remains a major employer with substantial growth potential constrained by wide ranging regulations restricting licenses and ownership. Fish and fish products remain a significant export from Tanzania, accounting for 3 percent of total merchandise exports in 2014 and providing employment for 121,000 people in the mainland and 25,000 people in Zanzibar. This represents a relative decline from 15 percent in 2003 reported in the earlier DTIS. Fish remains a major source of protein for a third of the population. The trend in fish exports over the past decade is shown in figure 5.5.

The sector is dominated by artisanal inland fishing of Nile perch, tilapia, and dagaa from lakes Victoria, Tanganyika, and Nyasa. The marine fisheries catch sardinallas, mackerel, and tuna from the Indian Ocean. Europe and Asia are the major markets for Nile perch and shrimp, while dagaa fish are mainly sold within the region.

FIGURE 5.5: Tanzania Fisheries Exports, 2005-14



Source: Derived from Tanzania National Bureau of Statistics.

The fisheries sector is heavily regulated and restricts artisanal fishing to Tanzanian nationals. Restrictive entry requirements for artisanal fishing inhibits competition, restricts investment, and is against the spirit of the EAC single market. The stated objective of the fisheries sector regulation of 2009 is the sustainable development and the protection and conservation of resources. Primary or artisanal fishing is reserved for Tanzanian nationals, however, there are no nationality requirements for fish processing. The Ministry of Livestock and Fisheries in Dar es Salaam issues the licenses to foreign investors and for all fishing vessels over 11 meters, while regional and district offices are empowered to license national investors and vessels of less than 11 meters. The fees for foreign-owned ships are double those for local vessels. Further, nationals are charged lower fees for export licenses. The Tanzanian government also levies an export royalty on a FOB basis by the weight and grade of the product, which discourages competition.

As in other areas of agriculture, major challenges facing the fisheries sector include the existing high government royalties on fish products, multiple and duplicated taxes, surcharges, and levies on fish products levied at the local and national level.³³

Addressing Constraints to Growth

Taking a trade lens to agriculture, this chapter has focused on access to agricultural inputs and cross-border regulations, fees, and taxes. The priority recommendations for addressing the constraints to expanding growth in the agricultural sector are summarized below.

The unpredictable imposition of trade bans creates market uncertainty and discourages investment. Imported agricultural inputs, such as seeds and fertilizer, remain heavily regulated, although the government has committed to streamline the regulations to enable quicker and more cost-effective access to higher productivity seeds and a wider range of fertilizers.

Obtaining accurate information on existing charges and tariffs and regulatory requirements applying to both the import and export of agricultural inputs and products remains challenging. There is no one source for all relevant information, producers and traders are required to contact multiple regulatory agencies. Establishing a National Agricultural Portal would address this constraint.

Reducing the barriers to accessing a wide range of agricultural inputs at competitive prices requires the government to streamline existing procedures and to remove the duplication of responsibilities across multiple regulatory agencies. Reforming the Seed Act and the Fertilizer Act to allow the fast track registration of new seed types and removing restrictions on fertilizer and types of fertilizer will encourage more efficient production.

Promoting increased commercialization amongst smallholders and encouraging small traders requires the government to reduce the implicit biases that effectively diminish and crowd them out from many agricultural markets. The government should review all the licenses, fees, and documentary requirements with the aim of reducing transaction costs.

Reducing the regulatory burden on small traders will encourage informal traders to declare their goods while crossing the border. This process may be facilitated through adopting a code of conduct that specifically aims to eliminate the uncertainty facing small traders of being subject to misinformation and harassment at the border. The Charter for Cross-Border Traders aims to address many of the challenges faced by small traders when moving goods across borders. Launched by the World Bank in response to an explicit request by local stakeholders, the charter introduces a mutual framework of rights and obligations that symmetrically applies to both traders and officials: it sets basic principles of transparency, efficient processing, fair treatment, and zero tolerance to corruption, and translates them into action through capacity building, extensive dissemination, and the introduction of toll-free line systems. Ultimately, the charter aims to facilitate small-scale cross-border trade, to improve relations between officials and traders, and to create the conditions for the latter to gradually formalize, thus contributing to increased customs revenues—additionally, the initiative provides for a number of gender-sensitive principles and interventions that intend to specifically address challenges faced by women cross-border traders (Brenton and others 2014).

With support from the World Bank and in close cooperation with the respective governments, traders' associations, and border agencies, the charter was successfully piloted in Malawi and Zambia, where, in some cases, it

contributed to major increases in formal small-scale trade transactions recorded by customs authorities, and to visible improvement in the relations between traders and officials. Additionally, charter pilot work was also initiated at two border posts in Tanzania, where the initiative greatly benefitted from close collaborations with the Ministry of Industry, Trade and Investment, Tanzania Trade Development Authority, and local government authorities, as well as traders' associations, private sector representatives and regional organizations, such as the Dar es Salaam Corridor Committee—such work could be expanded and replicated elsewhere in the country, as part of the measures taken to improve conditions at the border and facilitate the movement of small-scale traders and their goods. Finally, in 2014, the charter was also adopted by the Common Market for Eastern and Southern Africa as an official regulation, under the name of "Regulations for the Minimum Standards for the Treatment of Small Scale Cross-Border Traders." Similarly, and possibly as part of efforts related to the charter, resources should be devoted to enhancing the capacity of small-scale traders and officials, particularly in relation to the preferential trade conditions currently available under the EAC Customs Union, to special regimes such as the EAC STR, and to cross-border (agricultural) traders in Tanzania.

In March 2016, the World Bank approved a US\$70 million project to support Tanzania's agricultural sector through linking smallholder farmers to agribusiness to facilitate job-based growth. The project supports the SAGCOT and seeks to provide 100,000 smallholder farmers with new technologies, marketing practices, and expanded partnerships with more experienced agribusinesses. The recommendations in the action matrix complement the new agribusiness project while also supporting the principles of the NAP, which commits to increasing the role of the private sector in production, marketing, and pricing decisions to promote increased cross-border trade in crops and value-added agricultural products.

Notes

1. World Development Indicators (database), World Bank, Washington, D.C. (accessed December 19, 2016), <http://data.worldbank.org/data-catalog/world-development-indicators>.

2. Economic reforms in Uganda encouraged rapid

expansion in coffee production and significantly reduced poverty levels in the rural areas. For a summary, see World Bank (2007).

3. The poverty rate began to decline under the previous plans, 2001–07 and 2007–12.

4. The ASDP II highlights low land and labor productivity in the agricultural sector as constraints on agricultural growth (p.3). Increasing agricultural productivity would be expected to raise living standards in the rural areas.

5. Even in agencies with a good website, the information is not always kept up to date. For example, the Tanzania Revenue Authority website currently provides the Tariff Schedule for 2012 (accessed January 11, 2017), www.tra.go.tz/.

6. NPK refers to the value of the three macronutrients used by the plants, these are N-nitrogen, P-phosphorus, and K-potassium.

7. The World Bank Enabling Business for Agriculture (EBA) scores countries on both the quality and efficiency of their regulatory systems. For 2017, it is possible to compare Tanzania against 61 other countries across eight indicators (seed, fertilizer, machinery, finance, markets, transport, water, and information and communications technologies). The EBA was launched in 2014 and aims to allow countries to take stock of their regulatory environment and encourage change (analogous to the World Bank Doing Business Indicators).

8. Agriculture First in Swahili.

9. See section 1.3 of the National Agricultural Policy (2013).

10. Using COMTRADE Mirror Data.

11. Joint Cross Border Market and Trade Monitoring Initiative (2015).

12. Keyser and others (2010).

13. According to UN Comtrade data, dried and smoked fish almost certainly understate the true importance of these products because they are widely traded through informal channels.

14. For more information, see the U.S. Department of Commerce's International Trade Administration's website at <https://www.export.gov/article?id=Tanzania-Agro-Processing>.

15. United Republic of Tanzania (2011).

16. For a detailed explanation, see Amin and Stryker (2013).

17. Since each trader requires a license, this is not compliant.

18. World Bank (2009).

19. USAID-EAT (2013).

20. Information from industry sources.

21. No official reason has been given for the nonimplementation of the agreement on mutual recognition.

22. As is the case in Zambia.

23. In 2006, the Africa Union's Abuja Declaration on Fertilizer in Africa set a target of 50 kilograms per hectare by 2015.

24. It should also be noted that domestic transport costs contribute a large share of the total costs.

25. "The Fertilizer (Bulk Procurement) Regulations, 2017," The Fertilizer Act (CAP .378).

26. The exemptions in the revised VAT Act 2014 do not cover milk processing supplies and equipment and therefore might negate the recent productivity improvements in the dairy industry (personal discussion with an officer from Tanzania Dairy Board).

27. There are numerous studies examining the impact of export restrictions on food security. The consensus from the detailed case studies finds that export bans have been ineffective and may carry significant costs as the lower prices discourages farmers from increasing production.

28. For example, Diao and others (2013) or USAID Feed the Future (2012).

29. Small-scale farmers account for only 13 percent of all the rice sold in the market.

30. This is the most recent published survey.

31. Far East Asia includes imports originated from the Arabic peninsula countries, as it is considered that imports from Asia transit through these countries on their way to Tanzania.

32. Policy Dialogue on Tanzania Rice Chain Stakeholders in the EAC Common Market, September 2015.

33. High levels of taxation were identified as a major cross-cutting constraint in the 2005 DTIS, pp.146ff.

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