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Future Prospects

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10.1 Introduction

This final chapter pulls together the main findings of the book, highlights future challenges and opportunities for Ghana, and provides some guidance on the kinds of strategic changes that might help the country's efforts towards more sustained structural change. It also concludes with some reflections on what the Ghanaian experience suggests for the rest of Africa.

10.2 Economic Prospects and Options

10.2.1 The National Economy

As reviewed in Chapter 2, Ghana has followed a slow but steady growth transformation since its Structural Adjustment Program (SAP) of the 1980s, and national income has grown by 5.4 percent per annum on average (or 2.8 percent per capita) for over thirty years. This growth has been driven mainly by growth in labor productivity within sectors rather than the transfer of workers from low-productivity sectors like traditional agriculture to high-productivity sectors like modern manufacturing. In Rodrik's (2014) terminology, Ghana has benefited more from improvements in its fundamentals than from structural change. This is the result of a policy regime since the SAP focused on creating the enabling conditions for private-sector-led growth rather than many proactive state interventions in production. Although many workers have left agriculture, they have mostly moved into low-productivity jobs in the service sector, and this has added little to average labor productivity. Contrary to the Asian pattern of transformation, Ghana's industrial sector has stagnated rather than grown, and failed to create the high-productivity, less-skilled jobs in manufacturing that helped transform Asian living standards.

The agricultural sector has also performed reasonably well since the SAP, and grew by 4.5 percent per annum over 1994–2013. The cocoa sector grew by 5.6 percent per annum over this period, and remains a major source of foreign exchange. It also continues to produce high-quality beans that attract a price premium in the world market. The noncocoa subsector has also grown successfully, particularly roots and tubers and other agriculture (4.9 percent and 5.6 percent per annum, respectively). However, agricultural growth has been driven more by land expansion than agricultural intensification. Although labor productivity has increased through use of mechanization and other labor-saving technologies, Ghana has yet to widely adopt game-changing technologies that can significantly increase yields and land productivity, or to invest adequately in post-harvest handling and quality control. As a result, much of the noncocoa subsector is not internationally competitive, and struggles to compete with many imported foods or to expand into the export of commodities other than cocoa.

This pattern of "transformation without industrialization" has important implications for future growth opportunities. While the economy will continue to benefit from growth in within-sector productivities, these are likely to remain modest without significant new investments and technologies. In the case of agriculture, even past rates of productivity growth will become unsustainable without a major shift to land-intensification technologies as the land frontier is exhausted. Just to maintain, let alone accelerate, past levels of economic growth, Ghana will need to tap into new sources of productivity growth as well move more workers from low- to higher-productivity sectors. This means growing high-productivity sectors like manufacturing, modern agriculture, and formal services. However, this strategy faces demand as well as supply-side challenges.

On the demand side, high-productivity sectors can only expand if there is an adequate market. The best markets are export markets because demand is then highly elastic. One option is for Ghana to expand its traditional exports of cocoa, gold, and oil. Another is to develop new exports, such as manufactured goods and nontraditional agricultural exports. There is also scope to produce manufactured and agricultural goods that can substitute for imports, at least until those substitution opportunities have been exhausted. Growth in most other sectors will be constrained by growth in domestic demand, and relying heavily on these would effectively mean a "balanced growth" strategy for Ghana in which sectors that produce predominantly nontradables could only grow in proportion to growth in their domestic demand. For agriculture, which apart from cocoa faces an inelastic aggregate demand, this may mean that growth of the noncocoa subsector would hit a ceiling at around 6 percent per annum (Breisinger et al. 2012), beyond which the domestic terms of trade would turn against agriculture and act as a break on further growth. It will also be hard for the national economy to grow much faster than its past average without a significant increase in exports.

On the supply side, it seems likely that as a result of recent discoveries and investments in oil, oil exports will expand and provide an important, if volatile, source of government revenue. But its contribution to national per capita GDP is likely to remain small, and the sector is not likely to create much additional employment. Much the same is true for gold and other mineral exports. While these opportunities should of course be seized, the better opportunities for achieving structural change with growth in productive employment appear to lie with manufacturing and agriculture, both for export and import substitution.

However, manufacturing has shrunk in Ghana since the SAP, while the industrial sector at large has stagnated. Major constraints include the business environment, high transport costs, inadequate and costly port facilities, unreliable power supplies, inadequate access to finance, difficulties in obtaining land rights, high labor costs, and weak or ineffective industrial policies and state–business relationships. These constraints make it difficult for Ghanaian manufacturing firms to compete with imports, let alone expand into export markets. There is some recent indication of foreign investments in the assembly of bulky products such as tractors and cars imported into Ghana, and an Indian tractor company has opened a small unit. But, whether all of this will turn into significant assembly in the country remains to be seen.

Agro-processing, which is a major component of the manufacturing sector, offers brighter prospects because of its potential to substitute for imports in meeting a rapidly growing domestic demand for processed and pre-cooked foods. A fairly high share of processed foods on Ghanaian shelves are imports, even in smaller towns away from the ports (Andam et al. 2018). Ghanaian firms are producing niche products such as fufu flour and banana chips. They might also be able to export into the regional West African market. But the local processing sector, which is predominantly engaged in primary processing such as drying and milling, is not doing well. Employment in the sector shrank between 2014 and 2017 from an average of thirty workers to twenty-one workers per firm (Andam and Asante 2018). The sector is held back by many of the same constraints as manufacturing in general, as well as challenges in obtaining reliable supplies of raw materials of the right qualities from farmers. Its growth potential is therefore closely linked to a successful agricultural transformation that can produce raw materials of the right quality and at competitive prices.

10.2.2 Agriculture

The agricultural sector is still a major employer in Ghana, and while its labor productivity has about doubled since 1991 since the SAP, it is still lower than all other sectors except trade and personal services. However, it has good growth potential, both by expanding into growing markets and also by transitioning from traditional to improved technologies that could enhance its productivity and competitiveness.

Some of the best growth opportunities from the demand side are as follows:

- Further growth in cocoa exports. However, expansion of the cocoa area is reaching its limit and further growth has mainly to come from replacement of older trees with high-quality cocoa trees that can give higher yields while sustaining, perhaps improving the country's reputation for high-quality cocoa beans. This will require carefully rebalancing the use of cocoa revenues to more effectively supply critical inputs, including superior performing cocoa trees, while also maintaining adequate after-tax price incentives for growers (Kolavalli and Vigneri 2017). While productivity increases are needed, major producing countries such as Ghana and Côte d'Ivoire are becoming aware of the risks of cocoa supplies outpacing international demand, putting downward pressure on prices, as happened in 2016. Along with efforts to increase productivity, farmers need to be assisted to diversify so that they can better weather price volatility.
- Expansion of nontraditional exports like pineapples, mangoes, and vegetables. The biggest challenges here are producing high-quality produce at competitive prices, and delivering them to international markets in the same condition.
- Import-substitution opportunities exist for a wide range of commodities, particularly rice, yellow maize, poultry, vegetables, fish, and livestock, but they need to become more competitive in cost and quality. For example, vegetable yields in Ghana are significantly lower than in neighboring countries, all of whom participate in a regional market that is well integrated (van Asselt et al. 2018a). This in turn requires increased productivity to reduce production costs, improved quality to match those of imports, and improved marketing and distribution channels.
- Growing domestic demand for more nutritious and often perishable foods like fruits, vegetables, and livestock products, many of which are

ideal for smallholders to grow because they give high returns per hectare of land. For example, gross margins for tomatoes, onions, carrots, and scotch bonnet peppers are considerably greater than those of rice and maize (van Asselt et al. 2018a).

- Leveraging growth in Ghana's broader agri-food system. With rapid urbanization and changing diets, including consumption of more processed and precooked foods, and eating out, there is opportunity for agribusiness to add considerable post-farm-gate value to the foods consumed by urban people. The "quiet revolution" observed in the food systems of some East African and Southern African countries whereby small- and medium-sized enterprises (SMEs) are rapidly populating value chains is surely indicative of the changes Ghana can expect (Reardon 2015; Reardon et al. 2014). Agro-processing should be a major beneficiary of this food system transformation as long as it can develop in ways to compete with processed food imports.

Complementing all these demand-side opportunities is a considerable supply-side opportunity to raise agricultural productivity and increase competitiveness by shifting to improved technologies and farming practices. Yields and land productivity are still low in Ghana, and have increased only modestly since 1991. Many available technology and irrigation potentials for improving productivity have barely been tapped. For example, yield gaps between demonstrated potentials and realized averages are around 40 percent for cereals and 20 percent for legume crops (Breisinger et al. 2012). Some imported maize hybrids yield as much as 5 tons per ha, yet the average maize yield remains below 2 tons per ha (van Asselt et al. 2018b). An important reason is that less than 5 percent of the maize area is planted with improved varieties including hybrids, and the average age of the varieties grown is more than twenty years (Ragasa et al. 2013). Although farmers have replaced nearly all of the traditional varieties of most crops, they are not replacing them fast enough with better varieties.

However, these new opportunities also come with at least three key challenges that need to be confronted. First, the land frontier is tightening. Therefore, continued agricultural growth will become unsustainable without a significant technological transition to the kinds of intensification technologies and farming practices that lead to growth in land as well as labor productivity. Second, labor costs in agriculture are being pulled up by urbanization and competition from the rural nonfarm economy. The available workers are also getting younger and better educated, and less interested in traditional farming. This means that labor-intensive technologies, while still used by smallholders growing cocoa and other higher-value crops, are becoming less relevant for low-value crops like cereals and root crops and more so for most medium- and large-sized farms.

Third, the private sector is now in the driving seat along most agricultural value chains, and the public sector must learn to work more effectively with it. Except for the cocoa sector, many Ghanaian farmers have shifted away from weakened public systems to private sector enterprises for accessing their modern inputs, finance, and urban markets. This shift has also been embodied within many recent agricultural development projects promoted both by donors and the government that seek to leverage key private actors in value chains to provide better services to smallholders. However, apart from a relatively small share of farms that are embedded in contract-farming arrangements with large agribusinesses, most small farms depend on SMEs and noncontractual arrangements for linking to markets in value chains. Strengthening these linkages through policy reforms and public support rather than undercutting them provides an opportunity not only to increase efficiency and competitiveness along value chains, but also to generate a more inclusive and employment-intensive transformation within the agri-food system (AGRA 2017).

Relatedly, there is also new interest from large international and regional agribusinesses in Africa's food chains, as exemplified by the commitments made under the New Alliance for Food Security and Nutrition and the efforts of the Grow Africa Investment Forum. Ghana has joined both initiatives, and is actively encouraging such foreign investment. Large agribusinesses can play important roles in developing internationally competitive value chains because of their greater access to new technologies from outside the country (like hybrid seeds), and their scale and market power to develop and enforce quality standards along value chains, or to penetrate into export markets. Despite the promise, Ghana has yet to take any significant advantage of such foreign investments.

What would it take for Ghana to seize the available and growing opportunities within agriculture and the broader agri-food system? Many of the desired changes have been identified and discussed in previous chapters, and here we simply highlight some of the key roles for the public sector:

- *Providing enabling policies*. Ghana has done reasonably well since the 1980s in maintaining favorable price and trade policies for agriculture. Though the government still leans towards keeping the provision of some key services for farmers within the public sector, SMEs now play much bigger roles along value chains, particularly in downstream agribusiness. The government should encourage this trend, and allow private enterprises to take on more of these roles. This will require improvements in the enabling environment for both small and large businesses, and the development of more effective state–business relationships, including with SMEs and small traders.

- *Rural infrastructure*. Past public investments in rural infrastructure have given good returns, and the government has invested heavily in road and other infrastructure in the recent years. However, additional spending is needed on rural roads, farm tracks connecting farms to communities, electrification and energy, cold storage, urban marketplaces, and port facilities. The benefits from improved road connections are illustrated by the spontaneous development of motorized tricycle services, which have now become widely available in the north for transporting crops from fields to homestead and for bringing people to urban centers and market towns. Better marketing links have also helped households diversify away from staple crops, increase the area they cultivate, and produce and sell more home-processed foods (Mueller, Masias, and Vallury 2018).
- *Land policy reforms* are needed to ensure farmers have secure access to land, reduce land disputes, facilitate land transfers in both rural and urban areas, and enable agribusinesses to obtain land for commercial development. While long-term formal land-leasing arrangements have become increasingly popular, and institutions such as land banks that could reduce transaction costs for buyers and give landowners fair returns have been talked about and developed to various degrees, these efforts need to be sustained by more transparent land governance and policies.[1]
- *Better regulation of modern farm inputs* like seeds, herbicides, and fertilizers for quality and safety. Farmers need to be protected from dangerous chemicals, and assured that the inputs they buy are genuine and of acceptable quality (e.g., seeds need to be of the promised variety, disease free, and have acceptable germination rates).
- *Investing more in agricultural R&D*. Apart from cocoa, Ghana has seriously underinvested in its agricultural R&D system and urgently needs to increase its spending and strengthen the capabilities of the national

[1] https://ghanaguardian.com/sada-lures-investors-land-bank.

research institutions. Some of the maize varieties released in recent years, for example, do not perform any better than older maize varieties (van Asselt et al. 2018b). The research system needs financially sustainable strategies for developing, testing, and disseminating superior seed varieties, for responding to climate change, and to expand the scope of its work to support farmer diversification into higher value products for the domestic and nontraditional export markets. Research practices also need to be improved to provide better channels of communication between farmers and researchers about research needs and the effectiveness of newly developed research products like seed varieties.

- *Improve agricultural extension*. The government has hired more extension agents in recent years but extension is only as effective as the technologies available to agents to extend. Preliminary results from an experiment in northern regions of Ghana, for example, suggest that the use of effective extension methods to disseminate best practices for growing maize with existing varieties did not result in increased yields or profits, although farmer knowledge and practices were improved (Udry 2018).[2] Moreover, despite the devolution of agricultural extension to the local government level in recent years, there is still an urban bias in the distribution of extension agents across the country (Resnick 2018).
- *Seed systems*. In addition to strengthening the public R&D system, a recent IFPRI study has shown a need to make complementary improvements in the seed delivery system (Tripp and Ragasa 2015). These include: a) maintaining pure lines that are accessible to private breeders; b) strengthening the functioning of critical institutions in the seed sector, such as the National Seed Council; c) providing more effective coordination and regulation; d) guaranteeing the availability of foundation seeds; and e) ensuring the integrity and pureness of seeds sold to farmers. Regulation is still weak: seed certification and getting spurious seeds off the market remain critical. There still is not a viable mechanism for production of foundation seeds beyond the research, which has made the transfer of genetic material from the public to private sectors unreliable. The entry of a large African seed company that wants to serve the region based in Ghana has the potential to overcome some of the problems faced by Ghanaian seed producers. International seed companies have their own varieties and capabilities for testing them for local

[2] https://www.atai-research.org/wp-content/uploads/2018/07/Udry-DIRTS-overview.pdf.

suitability, whereas local seed companies must typically depend on the antiquated public sector facilities for testing. The presence of a regional player in the country can also be expected to hasten the approval of regional harmonization policies on seed standards.

- *Fertilizer and soil and nutrient management.* Fertilizer use in Ghana is still low and is widely used to offset soil fertility losses arising from shortened fallow periods rather than to increase crop yields. Returns to its use could be improved by more widespread soil testing and mapping so that fertilizer dealers and farmers can better match fertilizer blends with regional soil nutrient deficiencies. To sustain soil fertility, its use also needs to be complemented with improved soil and nutrient management practices, including crop rotations and precision farming. Improved soils would also enhance crop yield response to fertilizer. Initial public investments can attract private investments; e.g., creating a demand for soil testing can lead to private labs, fertilizer firms can be required to produce location specific fertilizers. A positive development is that several donor-supported projects and private companies working with local research organizations have developed region- and crop-specific information and identified fertilizer formulations that might be suitable for various regions. Simultaneously, there have been efforts to develop soil fertility mapping including by Optimizing Fertilizer Recommendations in Africa (OFRA) supported by the Alliance for a Green Revolution in Africa (AGRA).[3] Ghana is also negotiating with a large company to blend formulations in the country and also manufacture fertilizers.
- *Mechanization*. The demand for mechanization services, especially tractors for plowing, has grown rapidly in recent years and this demand is currently met by parallel public and private systems. As reviewed in Chapter 9, the private system has developed without government support, and is working well and has created a competitive market for hiring-in services. On the other hand, the AMSEC model recently promoted by the government seems not to be viable in its present form. It would be better if the government were to phase out the AMSEC program, and focus its efforts on supporting the private sector by funding appropriate mechanization research, technical training of young mechanics, and ensuring that financial institutions can provide the longer-term lending needed by private agents and farmers in the mechanization supply chain.

[3] http://africasoilhealth.cabi.org/wpcms/wp-content/uploads/2017/03/OFRA-book-low-res.pdf.

Of particular benefit would be research to support the mechanization of "control" operations such as seeding, fertilizer application, and harvesting, which can be expected to encourage the adoption of improved agricultural practices or intensification while reducing overall labor requirements. Better utilization of tractors for a range of operations would also make provision of tractor services much more remunerative.

- *Irrigation* has long been ignored in Ghana, and only about 3 percent of the crop area is irrigated, or less than 20 percent of the irrigable potential. Yet irrigation has a key role to play in increasing land productivity, facilitating the adoption of more intensive technologies, and helping to manage increasing weather risks. A lot of public sector money has gone into rehabilitating old, badly designed surface irrigation systems, and better options may lie in promoting small scale irrigation investments in wells, river lifts, and water harvesting at community levels.
- *Financial services.* At present, the formal financial sector provides little credit to smallholders other than cocoa growers. Banks are reluctant to lend for agricultural activities, which are perceived to be risky, and when commercial bank loans are available, interest rates range from 30–35 percent, in addition to a hefty administrative fee. SMEs in agribusiness also report that access to finance is a major constraint for them. Publicly provided credit guarantees, insurance or co-financing can be helpful for reducing risk along value chains, and making small farms more attractive to agribusinesses (Varangis et al. 2017). The government has launched the Ghana Incentive-Based Risk-Sharing System for Agricultural Lending (GIRSAL)[4] to underwrite 20–30 percent of the agriculturally related default risks assumed by lending institutions, and to help them develop more appropriate credit products.
- *Coordination along value chains.* Apart from cocoa, the value chain for which is successfully controlled by Cocobod, there are serious market failure issues in many other value chains that prevent the development of grading systems, value chain financing, and export marketing channels. This makes it difficult for domestic products to compete internationally in export markets or to displace more imports. As discussed in Chapter 8, in most cases marketing boards do not appear to be a relevant solution, and there have been several recent attempts to find more flexible

[4] http://www.ghana.gov.gh/index.php/media-center/news/3165-bank-of-ghana-launches-girsal-scheme.

institutional structures that can facilitate and encourage coordination and the development of non-market relationships among value chain actors, but without undermining a basic laissez-faire approach to the market. Some recent projects in Ghana, such as the Northern Rural Growth Project (NRGP) and the Market-Oriented Agricultural Project (MOAP), have enabled various actors in value chains to interact with each other by organizing value chain committees, but how effective they are remains to be seen. Preliminary findings suggest that the mere offer of platforms for exchange does not lead to technical or institutional innovations.

- *Linking small farms to value chains*. SMEs are the main entry point for most small farmers to obtain modern inputs or to link to urban markets, so policies that assist the growth of SMEs can be an indirect way of helping small farmers. Such interventions might include improving SME access to credit, and providing training in business management skills. Many value chain development projects including the USAID-funded ADVANCE have sought to strengthen the operations of aggregators/traders, processors, and tractor service providers through training and grants. Larger agribusinesses tend to avoid linking with many small farms because of the higher transaction costs and uncertainties involved compared to working with larger commercial farms. To overcome this impediment, one option is for small farms to be organized into producer organizations that can link with large agribusinesses, and there have been many attempts to do this in Ghana through the formation of Farmer Based Organizations (FBOs). However, the results have not been encouraging. Many agribusinesses have done it to various degrees on their own, but since, as one firm manager commented, it involves building relationships and trust not just writing contracts, it is not clear how public interventions can help scale up such arrangements.

10.3 Resources, Politics, and Practicalities

How likely is it that Ghana will or could adopt an agricultural transformation agenda along the lines suggested above? Fundamentally, the government would need to increase its level of investment in agriculture, take a more proactive role in guiding the agricultural transformation and overcoming market failures along important value chains, while at the same time supporting and building stronger alliances with the private sector. There are political as well as economic challenges involved.

Currently the government spends 4–5 percent of its total budget on agriculture, but the lion's share of that goes to the cocoa subsector. Ideally, this share should be increased to meet the CAADP target of 10 percent, but increasing government spending on agriculture or other agriculture-related development activities will be difficult now that the country is facing serious macroeconomic imbalances (World Bank 2017). Investments therefore must be strategic, focused, and more efficient. There is scope to increase the effectiveness of public spending if many of the off-budget projects funded by donors were better coordinated with each other and with the government's own investments. But differences in the development approaches taken by different donors and the government necessarily limit the extent to which they would be willing to align their programs and pool resources.

Another constraint is a weak state capacity for designing and implementing a more proactive and comprehensive development approach. As reviewed in Chapter 3, this capacity remains weak despite several past efforts to strengthen the civil service. It is also a barrier to the more effective public–private partnerships that are needed for developing value chains and reaching out to more smallholders and SMEs.

Adding to the challenge of the state's capabilities is the recent decision to devolve responsibility for agricultural policy formulation and implementation from the central Ministry of Food and Agriculture to the District Directors of Agriculture (DDAs) who are located in the country's 254 Metropolitan, Municipal, and District Assemblies (MMDAs). This has real implications for how and whether nationally defined objectives for agricultural transformation can be feasibly implemented. On the one hand, devolution promises to improve citizen oversight over policy priorities and enable farmers to have greater input into the agricultural policy process. On the other hand, staff capabilities may be even weaker at these devolved levels; recent research finds that since agriculture functions officially were devolved in 2012, there have been declines in agricultural extension staff and a general reduction in actual expenditures for the agricultural sector in favor of increased expenditures on visible public works projects that appeal to rural voters (Resnick 2018).

What other options are there for a proactive government effort that can cut across ministries and take a more holistic system view of the development challenges? Rather than trying to drive the entire agricultural sector forward at the same time, with all the public sector capabilities and financial resources that requires, there is growing interest today in more focused "first mover" strategies. A first mover might be a nontraditional export crop or a priority food staple that must compete with imports, and the idea would be to concentrate resources and effort on selected value chains and drive these hard for growth and employment creation. There can also be a regional dimension to first movers, for example, starting in high potential areas that have the best infrastructure, market access, and agricultural growth potential. Another spatial approach is the development of agro-corridors, agro-clusters, agro-industrial parks, and agro-based special economic zones. These typically use agro-processing as a driving industry, and seek to make links back to smallholders through various forms of out-grower or contract-farming arrangements. A first mover approach can lead to quick wins in terms of income and employment, and their visibility can also be good for developing political momentum and support for agriculture; government ministers and donors love successes. And once the first movers have been successfully launched and rural incomes and employment are rising, then attention can shift to other activities, regions, and goals.

A first mover strategy is not new. It is very similar to the Asian Green Revolution strategy, where an initial thrust on import substitution for wheat and rice grown in the best-irrigated areas led the successful rural transformation that followed (Rosegrant and Hazell 2000). It has also been used in Asia to drive nontraditional export crops (e.g., Vietnam used the approach to develop coffee production, moving from zero production to a major world exporter over little more than a decade). It has also been tried in Africa in the past (e.g., presidential initiatives for specific commodities, and integrated rural development projects) but with mixed success. What makes it a new and promising approach today is that it can build on embedded market liberalization policies and stronger private sector roles. First mover approaches provide platforms that enable relevant public and private sector players to come together to better serve groups of smallholder farms, while enabling public and private investments in infrastructure and supporting services to achieve critical levels. Moreover, because policymaking in Ghana has become more decentralized and communities and local governments have greater say, some regions are more ready for development projects than others.

10.4 Recent Developments

In an encouraging recent development, the government has elevated its level of support for agricultural transformation. However, less encouragingly, key components of the new strategy do not align well with the agenda outlined in Section 10.3.

Although Ghana participates in the CAADP process and has a country compact and a National Agricultural Investment Strategy (NAIS), these are not well developed and do not seem to guide the government's actual strategy for agriculture. The current administration came to power promising an explicit strategy for the inclusive transformation of small farms with emphasis on the development of agro-processing. It is implementing three centrally driven agriculture- and industry-related programs that are expected to benefit all the districts: planting for food and jobs (PFJ), "one village one dam," and "one district one factory." The political leadership including the minister and the president is fully behind the programs. It is also holding itself politically accountable by tying these programs to the party's manifesto. Apart from the ambitious PFJ, the vice president also announced recently that Ghana is preparing a Marshall plan for agriculture.

The PFJ aims to increase productivity by encouraging the use of improved seeds and fertilizers (MoFA 2017). The program has five pillars—seeds, fertilizers, extension, marketing, and e-agriculture, but at the heart of it is subsidized supply of seeds and fertilizers. In many ways it is a scaled-up version of strategies Ghana has followed in the past, with minor differences. Many of the past strategies, particularly the one implemented immediately after gaining independence and the "Operation Feed Yourself" implemented in the 1970s, focused on mechanization and the development of large-scale private and state farms. PFJ on the other hand, seeks to pass on subsidized inputs to thousands of farmers in every district in the country.

By supporting the production of seven crops and addressing various issues—extension, markets, and production costs—the program lacks focus. It is not designed to overcome market failures in any specific value chains, but merely to reduce costs to boost the use of fertilizers and seeds. It is an improvement over the fertilizer subsidy programs implemented thus far in that it also encourages the use of improved seeds. But it is not targeted, so will subsidize substantial amounts of fertilizer that would be used anyway, and where it does induce additional fertilizer and seed use, it remains unclear as to whether farmers would continue to use those inputs if the subsidies were removed. Otherwise, as in the past it will be a program of "subsidized fundamentals" through which input use may be increased in the short run without overcoming bottlenecks that may exist in these chains. In parallel, donors are supporting commodity-based projects but because of the very nature of projects, they lack the continuity and the flexibility to effectively develop value chains.

The government's assumption of the supplier of inputs also reverses the trend in which farmers were becoming market oriented and private sector was developing slowly. Farmers will continue to see the state as the supplier of credit and inputs and the buyer of last resort. Although inputs are purchased from private companies, the private sector becomes tethered to the state, grateful for the business opportunities and its existence. Whether the program will serve as a state-led market development for private sector will depend on whether technologies that are pushed through the project can be sustained without subsidies.

The design of the other two programs, the "one village one dam" and the "one district one factory" to appeal to the electorates all over the country compromises their effectiveness. In addition to the difficulties in adequately financing them, spreading investments over a large area is likely to dilute their potential impact and returns. For example, carefully sited larger irrigation systems are likely to be more productive than small dams in each village, unless the objective is to meet domestic water requirements. Similarly, significant support for processing of a few critical agricultural products in priority districts is likely to be more effective than spreading limited resources uniformly across all districts, unless there are significant investment opportunities in every district to choose from. While the programs are politically appealing and address some real concerns, Ghana is missing an opportunity to use its limited resources to more selectively intervene in critical areas to trigger private-sector-led innovations that can sustain an agricultural transformation.

10.5 Implications for Other African Countries

Ghana's economic growth story is particularly relevant because there are key parallels with many other countries in Africa. Despite being unusually blessed in its endowment of minerals and natural resources, and having easy access to world shipping lanes, Ghana is experiencing the same pattern of rapid urbanization without industrialization that is ongoing across most of Africa. Moreover, Ghana is typical of other African countries in that it has not experienced a widespread agricultural revolution, even though the sector is still a major employer. While the agriculture sector has grown at a reasonable rate, it continues to be only a major cocoa exporter, and is becoming increasingly dependent on imported foods. Recent agricultural growth has been achieved mainly through land expansion rather than the uptake of higher-yielding technologies. While labor productivity is growing in agriculture, the sector still has one of the lowest labor productivities in the economy, which is also true in many other African countries.

Countries, especially smaller ones like Ghana, cannot get rich by producing predominantly nontradable goods and services. Instead, modern agriculture and agri-business, either for export or import substitution, offer opportunities to Africa for future prosperity. However, Ghana's past experience shows the consequences of neglecting agriculture in the post-SAP era. Despite its rich agricultural endowments and potential, Ghana like most Africa countries has not invested sufficiently in such basics for agricultural development as R&D, irrigation, rural roads, transport and storage systems, and rural financial systems, all of which are needed if the private sector is to successfully lead an agricultural transformation.

Nonetheless, Ghana is unusual by African standards in that it has experienced over three decades of stable and democratic government, during which time it has also worked to develop an enabling environment to attract the private sector. If any country can be seen as a test case of the Washington Consensus approach that guided the SAP reforms, then Ghana is it. And the verdict is that while a focus on enabling policies appears necessary for achieving the kinds of rapid economic growth seen in Asia, it is not sufficient. Moreover, today's globalization has challenged many late developers, including African countries, which are facing limited opportunities for export manufacturing; together with import competition at home, industrialization becomes much more difficult in Africa than it was in previous decades in much of Asia.

Encouragingly, African governments are slowly rediscovering the importance of their agricultural sectors and the need to transform them through more productive technologies, and the CAADP process is an encouraging step in bringing some political pressure to that end. Several key donor agencies are also backing agricultural development again after a long respite. A focus on first-mover strategies that lead to quick and visible successes despite weaknesses in public sector capabilities might also help develop greater political momentum in support of agriculture. But perhaps the best hope lies in the fact that the ongoing changes in Africa's food system are creating a wealth of new opportunities not only for farmers, but also for a growing agribusiness sector. Due to rapid urbanization and rising incomes, there has been a shift in patterns of food demand that is driving rapid growth in a swath of agribusinesses that move foods from rural to urban areas, and process and distribute them in ways that is adding considerable value addition beyond the farm gate. The World Bank has estimated that agribusiness in Africa will be worth about $1 trillion by 2030 (in 2010 prices), or over $1,000 per African. That is a huge market opportunity to be seized, and does not include the additional value of agricultural production that will be required to supply the agribusiness sector.

The sheer size of these opportunities also has been recently recognized in two Africa-wide studies (ACET 2017; AGRA 2017), and they may be large enough to spark a new political dynamic built on complementary public and private sector interests, leading to new investments and partnerships and supporting policies. If so, governments in African countries need to play more proactive roles in partnership with the private sector to fix market and institutional failures along important value chains that constrain private sector development and the effectiveness of market solutions. And they need to do all this while prioritizing small farms and SMEs to ensure that the agricultural transformation is inclusive and employment-intensive.

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