EPRC ECONOMIC POLICY RESEARCH CENTRE

Towards Sustainable Development

POLICY BRIEF

Issue No. 153 September 2022

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Did the Ugandan Agricultural Sector Achieve Structural Transformation during 1987-2020?

Executive Summary

Uganda has experienced modest progress in transforming agriculture during 1987-2020. The country's agricultural growth rate fluctuated over time; the contribution to GDP declined significantly; production increased even when yields declined; exports increased in absolute value; contributing to a rise in incomes and a decline in poverty, although inequality increased. The changes in the sector did not lead to a shift in labour to other sectors as expected, partly due to the high population growth rate. Relatedly, Uganda experienced agricultural and arable land growth at the expense of forests and marginal lands. Although land reforms significantly contributed to the agricultural transformation, the many unresolved evictions negatively affected productivity and investment in the sector. The food nutrition and security policies remained elusive, with many indicators worsening. Therefore, ensuring agricultural transformation will require an integrated approach that addresses the different components of the agricultural sector.

Introduction

The agriculture sector has, over the years, demonstrated to be a very important sector of the Ugandan economy. Although its contribution to GDP has significantly declined over the last three decades, from an average of 70 to 24 percent because of partial transformation, it still significantly contributes to economic growth, exports, poverty reduction, employment, food processing and food security. The agricultural sector has gone through the different phases of economic regimes and paradigms that define the policies and, therefore, reforms with a wide range of ramifications: (i) economic recovery and structural adjustment programmes

(1987-1996); (ii) Poverty Eradication Action Plan (1997-2010); and (iii) Vision 2040 and the National Development Plans (2010-2021). The phases had different overarching objectives that informed policies and reforms. The first phase focused on economic recovery with liberalization and privatization as the major reforms; the second phase focused on poverty reduction using a private sector-led approach; the third phase focused on social-economic structural transformation with the state and private sectors complementing each other. These phases characterize the unique performance of the agricultural sector, suggesting what worked well and what did not work well.

The sector has gone through an institutional transformation from a predominantly state-controlled to a private-led system with government regulation. This has raised several questions regarding the transformation of the agricultural sector throughout the analysis, particularly about: objectives of agricultural transformation, evolution and future strategies; trade-offs with broader development agendas; transformation progress and gaps; and foreseeable plans to drive agricultural transformation in Uganda. This policy brief aims to highlight Uganda's agricultural transformation process by establishing what worked and did not work in the last three decades so that we can make appropriate policy prescriptions. The policy brief draws on a study titled "*Agricultural Transformation in Uganda: Taking Stock of the Last Three Decades*, commissioned by the Food Agriculture Organization (FAO), that traces the agricultural sector reforms and assesses their role in supporting agricultural transformation through their effect on production, productivity, poverty reduction, export growth and labour dynamics, among others.

The framework for analysis

Our adopted framework defines agricultural transformation as the process by which an agriculture-food system transforms over time from being subsistence-oriented and farm-centred into one that is more commercialized, productive and off-farm-centred. The study relies on a systematic and thorough analysis of previous policy and scholarly literature (document review) to establish the policies and reforms implemented during the analysis period. More importantly, efforts are undertaken to understand and highlight how policies and reforms either bolstered or curtailed the pace and nature of agricultural transformation. The study uses secondary data obtained from the databases of the Uganda Bureau of statistics, the World Bank, the Ministry of Agriculture, Animal Industry and Fisheries, the National Planning Authority, among others, to conduct detailed analysis on the variables of interest. In answering the questions regarding what policies can drive agricultural transformation and how these can be classified to support decision making, the study used the International Institute for Sustainable Development and International Food Policy Research Institute policy taxonomy of agricultural transformation.

The process of agricultural transformation is considered inclusive and transformative when the results lead to poverty reduction and increased food security. In the framework, as transformation takes place, it is hypothesised that labour and other resources move from traditional into more modern economic activities, leading to an overall rise in agricultural productivity and incomes. Therefore, the role of agriculture in overall economic transformation is thus defined and characterized as including, among others, the following: moving an economy from low productivity in all sectors to high productivity in all sectors.

Findings

Economic Recovery Programme (ERP) and Structural Adjustment Programme (SAP) (1987-1996)

The government needed to address specific issues to rehabilitate the agricultural sector to realize its full potential. The immediate issues were: marketing, agricultural inputs, agricultural credit, manpower and training, land tenure, and agricultural research. Reforms in pricing, marketing, and credit were implemented to encourage production and improve efficiency in the agricultural sector in short to medium-term. In the longer term, issues concerning research, training, extension, veterinary services, and input distribution were to be attended to. Non-traditional exports were introduced, including flowers, *Matooke* banana, apple banana, hot pepper, chilli, okra, green beans, passion fruits, fish and others. The emergence of non-traditional export crops benefited from the abolition of taxes, improved transport infrastructure, and political stability. Trade in non-traditional exports was liberalized during the reforms, leading to the removal of market and price distortions.

The contribution of agriculture declined from 61 per cent by 1987 to an average of 51 per cent between 1990 and 1996, a natural outcome of the rehabilitation of the rest of the economy. Similarly, agriculture's share in exports declined from 98 per cent to 79 per cent (1990-96). The relative-level decline occurred in absolute-level growth, with an average of 3.8 per cent between 1990 and 1995. The area planted for food crops increased consistently from 4.3 million hectares to 4.9 million hectares. Therefore, any increase in food production was mainly because of acreage expansion rather than improved crop yields.

There were significant improvements in the output of the tradeable crops. Coffee increased from 2.2 million bags in 1994-95 to over 4 million bags in 1995-96; cotton from 10,000 bales in 1991 bales to 120,000 bales in 1996-97; tea from 4,800 tons in 1990 tons to 13,000 tons in 1995; and tobacco from 940 tons in 1987 to 6,851 tons in 1995. In 1995, non-traditional exports were at US$101million from less than US$1.4 million in 1988 and contributed 12 percent of total export earnings. In the livestock subsector, cattle numbers increased from 4.5 million in 1989-90 to 5.23 million in 1995-96. Dairy milk collection and processing increased from 50,000 litres in 1990 to 1.2 million litres in 1995.

National poverty fell from about 60 percent in 1992 to 34 percent in 1999. This suggests positive agricultural performance was strongly related to poverty reduction. Regarding income distribution, estimates of the Gini coefficient indicated that inequality rose slightly between 1989-90 and 1992-93 – from 0.38 to 0.41, primarily because of urban areas, where the Gini coefficient increased from 0.37 to 0.44. Conversely, in the rural areas, the Gini declined from 0.36 to 0.35.

The SAP reforms in the agricultural sector supported the tradeable agricultural commodities subsector, with a major emphasis on institutional restructuring and the reorganization of market structures through liberalization. Still, very little attention was paid to productivity improvement. Indeed, the liberalization of the agriculture sector led to significant increases in product prices as an incentive for more agricultural production. However, price incentives are only one of many essentials to improve agricultural productivity. Thus, increasing productivity requires a holistic package, including land tenure reform and land policy, to ensure that farmers have access to land, that the land is protected, and that they do not force farmers out of their land. Other essential ingredients to increase productivity, like inputs, were scarcely part of the reforms. The promotion of labour-saving technology, such as ox ploughs and small tractors, was not part of such a package. The adoption of high-yielding, disease and drought-resistant varieties was absent. Agricultural research into such varieties and their applicability by extension services are essential, but it was conspicuously absent. It is observed that the subsidy removal and price liberalization policies under the ERP resulted in price increases in many agricultural inputs beyond the reach of farmers, making it difficult for them to adopt high-yielding technologies.

Among the many weak points in the reforms was the lack of improvement in the marketing infrastructure, which required: repairing and maintaining the existing feeder road network; rehabilitation of physical structures to guard against weather conditions during storage; availing marketing credit to intermediaries to sustain competitive prices to the farmers and encouraging private sector involvement in the provision of appropriate storage facilities to minimize and/or eliminate post-harvest losses and quality deterioration; encouraging private sector involvement in agro-processing facilities to extend the shelf life of perishable agricultural commodities; establishing commodity exchange markets to help farmers sell their goods in advance to be delivered in some future periods, and guaranteeing farmers a ready market at a specified price; developing internal price stabilization policies for farmers, and enhancing the role of women in the production and marketing of food crops.

Agricultural transformation during the PEAP Period: 1997/98 – 2008/09

During the PEAP period, agriculture was classified as Uganda's major primary growth sector and a source of livelihood (employment) and income, especially for poor people. Therefore, the government implemented several reforms and interventions to support the sector. These include the Plan for Modernisation of Agriculture (PMA), Agricultural extension reforms, Research and Technology Development, Rural Development Strategy, Decentralisation and Area-Based Agricultural Modernization Programme, among others. During this period, the government

focused on developing and implementing national laws,[1] regulations, policies[2] and plans that are crucial for supporting agricultural sector transformation. The government also coordinated the interventions of stakeholders, especially the private sector actors and development partners. The government committed to providing a sound investment climate by addressing structural constraints such as low human capital development, infrastructure (energy, road and water) deficits and limited access to finance that deter inclusive and transformative agricultural sector growth. Note that the state's focus on creating an enabling environment and regulating the sector meant that the state played a passive role in critical aspects of the development and transformation of agriculture.

Contrary to expectations, the anticipated agricultural transformation advanced slower amidst increasing agricultural investment by the public and private sectors. This was because of the state's focus on creating an enabling environment and regulating the sector, a passive role in ensuring agricultural transformation. This passiveness resulted in slow agricultural sector growth of about 3 percent, low productivity and exploitation of farmers. Nonetheless, a poverty reduction, improvements in household incomes, increased employment and export growth were observed as farmers adopted quality inputs and accessed extension services. However, the significant reduction in poverty during this rea was not accompanied by a similar improvement in food and nutrition security given that high chronically malnourished infants, stunting among children under five years, characterized by wasting and underweight prevailed. Food insecurity still prevailed, with a sizeable proportion of the population not meeting the recommended daily caloric intake.

Agricultural transformation during the Vision 2040 and NDP phase: 2010-2020

During the NDPI period, the NDPI projected that the agriculture sector would register a growth rate of 5.7 percent in 2014/15, with the highest growth rate of 5.8 percent realised in the second year of implementation. However, the performance of the sector was modest compared to expectations. A decline in access to extension services at the end of NDPI was observed. General trends show that the application of pesticides continued to decline, likely because of high costs and poor coordination of delivering farm inputs. Regarding the supply of water for agricultural production, there was an improvement in the access, albeit extremely low. There was a decline in the usage of improved seeds from 19 to 10 percent between 2009/10 and 2011/12. We also observed that the development of the agricultural value chain did not meet expectations because of uncertainties of weather, land tenures and shortage of inputs.

Nonetheless, there was notable progress in research to improve the productivity of crops, forestry, fisheries, and livestock. For example, NARO made significant advancements in creating new technologies. Most importantly, the investments and implementation of the reforms and policies realised some level of agricultural transformation reflected in increased production and consequently contributed to poverty reduction.

The NDPII (2015/16-2019/20). The NPDII aimed to increase research in agriculture, expand extension services, promote agricultural mechanization, increase access to inputs, water for production, markets and credit, and streamline sectoral administration, among others. Improvements were evident in the growth in cash crop production, especially coffee, and crop yields in 2018/19 for some commodities such as rice, sweet potatoes, cassava and banana; increased market access and trading prospects; and access to credit, albeit low. However, minimal growth was realized by the sector between FY 2015/16-2018/19. The sector registered growth in cash crop production especially coffee, although the food crops registered a slower growth in comparison to that realized during the NDPI. The migration of labour to higher value chains and other sectors was not achieved because of high population growth; inadequate access to extension services, characterized by regional and gender disparities in 2018/19; use of fertilizers and pesticides remained low; and the effort towards increasing food availability and nutrition saw a reversal during NDPII.

The plan period witnessed increases in crop yields in 2018/19 for some commodities such as rice, sweet potatoes, cassava and banana compared to 2015/16. This is partly attributed to increased cultivated acreage and input use improvement. However, a snapshot of the performance of the strategic commodities shows stagnation, with negligible fluctuations, from 2015 to 2019. Overall, even when production increased, productivity declined.

The goal to reduce overall agriculture employment and trigger labour migration to higher value chains and other sectors was not achieved owing to the high population growth rate. It is also evident that farmers' access to agriculture extension services declined from 2015/16 to 2018/19. This was mainly because of the inefficiencies in the implementation strategies of the NAADs programme. In addition, there were visible disparities in access to extension services by region and gender in 2018/19. The construction and development of markets increased market access and trading prospects. There was glaring evidence that the plan did not improve households' food consumption and ease shocks that negatively affected nutrition. Notably, the effort towards increasing food availability and nutrition saw a reversal during NDPII.

There were several challenges relating to land management, including insecure land tenures or lack of land ownership (especially by women), encroachment, rising population, slums, weak land laws and administration at the national and local levels. This resulted in pressure being put on land for natural resources such as forests, increasing production while reducing productivity.

Using enhanced seeds/seedlings exhibited a downward trend from 2015/16 to 2018/19. This shows that interventions aimed at increasing access to high-quality seeds fell short. The usage of pesticides to control pests, diseases, and vectors increased in contrast to 2015/16. The application of fertilisers remained a pivotal obstacle to Uganda's productivity across all crops as the uptake remained significantly low. Increasing access to water for agricultural production (Irrigation, water for livestock, aquaculture-fish ponds/caging) remained a daunting task. Thus, the use of irrigation as a water source for agricultural production did not meet expectations as envisaged by the NDPII.

Access to credit also improved, but was way below the financial needs in the agricultural sector. The loans towards the agricultural sector, particularly the primary sector (production), remained noticeably low compared to the secondary sector (agro-processing and manufacturing), as well as the services sectors (educational, finance services, health, and hotels.

Future Plans for agricultural transformation in Uganda

The dismal progress registered in agriculture suggests that there are still several challenges that need to be addressed to propel the sector towards the total transformation envisaged and required. The three decades of reforms and experiments with different policies and strategies have produced some level of transformation, notwithstanding the persistent challenges. These are identified in the current NDP III 2020/21—2024/25, cascaded into the MAAIF strategic Plan 2020-2025 of the Agro-industrialization Programmes and articulated in the situational Analysis of the Agriculture Sector in Uganda. The persistent challenges can be summarized as follows: (i) large subsistence economy; (ii) low labour productivity; (iii) wide gap in yields between research stations and farmer fields; (iv) inadequate support services; (v) limited access by farmers to financial services such as credit and insurance; (vi) a poor land tenure system coupled with an increasing population; (vii) limited access to market and competitiveness of local products in most international markets; (viii) shortage of standard and modern storage facilities; and (ix) insufficient supply of raw materials besides the poor infrastructure.

Although the government plans to address the challenges in the agriculture sector and improve its performance by implementing several measures, its projected budget reveals that this is unlikely to be achieved. The ideal budget for the MAAIF strategic plan is estimated at UGX 9,963.09 billion for the period of the plan, while the constrained budget is estimated at UGX 5,023.05 billion. This suggests that the resources planned for the strategy are about half what is required to address the identified challenges. Most of the resources (UGX 7,212 billion) address the production and productivity challenges which takes about 70 percent, followed by agro-processing. This is a demonstration that the desired transformation is unlikely to be achieved.

Conclusion

Despite several challenges, Uganda has experienced modest progress in transforming agriculture over the past three decades. Uganda's agricultural growth rate has fluctuated over time, although it has had steady episodes that have contributed to agricultural transformation. Although agricultural production and productivity initially improved starting in the late 1980s,

owing to deficiencies in input application, there was a decline in the latter, especially during the Vision 2040 period. Therefore, increase in production was primarily explained by expansion in cultivated land and not improvements in the yields (or productivity). This is compounded by the high birth rate that led to rapid population expansion and, therefore, increments in arable land.

Furthermore, the share of agriculture to GDP, relative to other sectors, significantly fell, suggesting the transformation of the agricultural sector, although the contribution of the agricultural sector in absolute terms significantly increased. The country also experienced a transformation in the export sector with the increasing diversification of agricultural exports. The share of non-traditional agricultural exports has been increasing over time because of targeted government efforts and growing global demand. Although several factors contributed to poverty reduction during the three phases, the reforms, especially in the agricultural sector, made a significant contribution. There was a visible reduction in income headcount poverty from 56.4 percent in 1992/93 to 20.3 percent in 2019/2020.

Ensuring agricultural transformation requires an integrated approach that addresses the different components of the agricultural sector. Thus the availability of agricultural land, population dynamics, pricing policies for agricultural produce, stable macroeconomic policies, public investment in research and development, extension services, rural electrification and irrigation, rural infrastructure (roads), land and other institutional reforms are core to supporting agriculture transformation.

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Endnotes

1 The National Agricultural Research Organisation Act (2005), the National Agricultural Research Act (2005), the Local Government Act (1997), Seed and Plant Act (2006), Agriculture chemicals (control) Act (2006), Dairy Industry Act (1998), National Agricultural Research Act (2005), National Agricultural Advisory Services Act (2001), Water Act (1997)

2 Water Policy (1999), National Agricultural, Research Policy (2006), the National Meat Policy (2001), the National Animal Breeding Policy (1997), the National Animal Feeds Policy (2005) and the National Fisheries Policy (1998). However, Uganda did not have an overarching agricultural sector policy – this was further developed in 2013.

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