

Conference Report

Technical Convening on Smallholder Agricultural Transformation, Arlington, VA, USA, May 7-8, 2015.

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In an effort to revive agricultural growth in developing countries, especially in sub-Saharan Africa (SSA) and particularly after the 2008 global food crisis, several high-level government commitments were made. African Union member states pledged to allocate 10% of national budgets to agriculture, and donor countries in the 2009 L'Aquila Food Security Initiative pledged to increase support to agriculture and food security. The U.S. commitment of at least \$3.5 billion over three years resulted in the Feed the Future initiative, with an overarching objective of inclusive economic growth particularly in agricultural growth and rural development. While many Feed the Future activities are focused on improving agricultural productivity and growth arising in part from use of new technologies, the Feed the Future initiative recognizes that sustainable and inclusive growth is the result of systemic agricultural transformation of which technical change is just one aspect.

Our understanding of structural and agricultural transformations needed for inclusive growth has not kept pace with new economic realities or broadened the narrow emphasis on the movement of labor out of agriculture and into industries. To take stock of current thinking and state of knowledge on issues pertinent to smallholder agricultural transformation, a two day technical convening was held in Arlington, VA on May 7-8. The convening, organized by a consortium of universities led by Rutgers University and funded through USAID's Feed the Future initiative, brought together leading academic researchers and policy makers to discuss and debate current thinking on agricultural, food and nutrition policy. Five sessions were organized around a set of questions which the panelists were asked to address and which formed the basis for the dialogue among the participants. This report highlights the discussion in each of the sessions, and what they imply for further research as well as effective development policy and assistance.

What are the attributes for a successful agricultural transformation?

A basic tenet of development economics characterizes structural transformation to be driven by the movement of labor from rural (largely agricultural) to urban (largely manufacturing) centers. This process is enabled mainly by increases in agricultural productivity, often measured by crop yields or other on-farm activity metrics. We now recognize that the both the rural economy and the set of agricultural- and rural-economic related systemic changes that result in rapid development and disappearance of poverty extend far beyond the farm. This begs the question: what really is an agricultural (and rural economic) transformation in the development context?

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There was considerable agreement that increasing farm productivity has been, and will continue to be, the driver of agricultural transformation. Productivity growth has to come not only in form of higher land productivity (yield) --but also in higher labor productivity. A more holistic productivity measure, and one that drives long term economic growth is total factor productivity (TFP) which takes into account productivity growth of all inputs and resources and reflects the improvements in input quality. Evidence presented at the session shows that growth in African agriculture production has accelerated led in large part by technical change measured by TFP. Unfortunately, the growth has been uneven with many countries in SSA lagging by considerable margin

There was also convergence on the view that increasing farm productivity by itself will not be enough to allow for a smooth agricultural transformation process. If productivity increases are not linked to market access and to efficiency gains in agricultural value chains, farmers will have little incentive to adopt productivity improving technologies and practices.

Initial conditions were also considered important for a successful agricultural transformation by some panelists. Uncertain land tenure—and in many cases the complete lack of property rights—often prevents farmers from making the necessary investments that would lead to the adoption of improved inputs and technologies. The rapid agricultural growth and transformation of certain North Asian countries has partly been attributed to equitable distribution of tenurial rights. Unfortunately, the conditions and political will to carry out land reform in Africa simply do not exist as it did in post war Asia. Similarly, the export oriented industrial development in both urban and rural areas that was the hallmark of Asian growth, is unlikely to hold for Africa in the face of increasing trends towards knowledge-intensive employment growth in services instead of labor-intensive growth in manufactures in the past.

How then might agricultural transformation be different for African countries that are in the early stages of the process? While it is difficult to answer this question, it was felt that it *can* be different. For example participants mentioned the increasing importance of non-farm rural employment that has the potential to increase rural income and slow the movement of labor to cities. The spread of information and communication technologies would suggest that businesses in remote locations could become viable and provide new employment opportunities for rural populations. Irrespective of what this pathway may look like, it will need to be managed such that it does not result in unsustainable urbanization, neglect of smallholder farming and non-farm rural employment, rising inequality and deleterious effects on the environment that have come to characterize structural transformation of the past.

Several participants and panelists noted that while the convening was focused on agricultural transformation, the industrial and services sectors cannot and should not be completely ignored. There are significant sectoral inter-dependencies such that successful agricultural transformation is as much about what is happening outside agriculture as within agriculture. Finally, convening participants were reminded of the long term nature of the agricultural transformation process that will yield beneficial outcomes only if there is sustained investments and policy support to the sector and a favorable enabling environment for farmers and agribusiness investments.

What is the role of agriculture in economic development?

This question has been debated by researchers and policy makers for years, and the differing views on the issue explains the divergent development trajectories of countries. One view, predominant in the early post war era, saw agriculture as a low productive and declining sector whose usefulness was limited to it providing labor, food and other resources for the industrial sector (see Timmer, 1988 for a review). More recent thought sees agriculture's role being much broader and emphasizes its role in improving livelihoods and providing environmental services (World Bank, 2007).

Panelists also reflected on the recent surge in economic growth in several SSA countries and what role agriculture has played in achieving this growth and whether it can be sustained. Evidence presented at the convening suggests that a good part of the growth is due to growth in services including agricultural and food service industries and construction.

For service-sector led growth to be sustained concurrent growth in--and linkages to--other sectors of the economy, especially agriculture would be required. However evidence presented at the convening would suggest that these linkages may not be as strong as suggested and even questioned the poverty impacts of recent agricultural growth in SSA. One reason might be—as evidenced by the case of Zambia— the rise of medium sized farms and land inequality with limited linkage to non-ag rural sector and consequently lower multiplier effects. Larger farms cultivate less of their land, and therefore account for lower output per unit of land. For the case of Zambia, this effect is compounded by the fact that farm consolidation has been driven by land acquisition by urban households that make more of their purchases in urban areas relative to rural.

Will rural non-farm employment be the basis for a new type of agricultural transformation?

In many countries the labor that left agriculture in the structural transformation often went under- or un-employed as opportunities and absorptive capacity of the urban sector were limited. The rapid urbanization strained resources resulting in poor living conditions and civil strife. One way to slow down labor movement might be to create non-farming opportunities in rural areas. The third session explored the role rural non-farm employment (RNFE) has played in income generation and whether it can be a source of sustainable growth in rural communities.

RNFE is already an important contributor to rural incomes, accounting for 30-40% of rural incomes in SSA. Although RNFE implies a range of economic activities, it is mostly focuses on providing services along the various parts of the value chain associated with farm production (e.g. inputs, processing, marketing and transport). RNFE also arises as a result of linkages on the consumption side as higher farm incomes imply an induced demand for non-farm goods and the need for non-farm enterprises. Multiplier effects of these linkages can be significant: RNFE not only increases wages but also lessens the credit constraint that afflicts so many smallholder farmers.

The nature of RNFE with its linkages to farm activities, however, may also limit its growth. As a panelist noted, the seasonal nature of farming would imply that economic activities linked to it would also be seasonal in nature. For example in Rwanda there is a move towards potato production in the hope that it would generate both on and off farm activities, yet most of the potatoes are harvested and processed

in a four week period. Competition for labor and capital with traditional farming activities could also have an effect and potentially limit growth of both farm and non-farm enterprises.

One implication of these constraints is that while policies and investments to encourage RNFE are likely to have high returns initially, they could be short lived if they don't also encourage the emergence of more diversified enterprises that go beyond agricultural value chains.

What is the relationship between nutritional transition and agricultural transformation?

The puzzle of agricultural transformation is that rising farm productivity and incomes, difficult as they are to achieve, do not necessarily improve smallholder nutritional outcomes. Stunting and wasting in children remains prevalent in parts of the world that have experienced significant economic growth. The panelists and participants in this session identified several reasons for this. First, the productivity improvements that underlie income growth are often limited to a few staple crops and thus do little to help dietary diversity. An increase in the supply of these crops—and the consequent lowering of prices—may lead to the consumption of nutritionally unbalanced foods. Second, as household wealth increases and the basic caloric requirement is met, expenditure often turns to consumer goods and services such as health and education. Food purchases shift to more processed foods as well as foods away from home that tend to be less nutritious. Third, consumers are often unaware of what constitutes a healthy and nutritious diet which is a consequence of limited access to information, low education attainment, and the direct marketing of processed foods and foreign diets. Finally, the unavailability of nutritionally diversified food items in local markets often limits consumer food choices. The low demand for such foods discourages supply, but supply is also constrained by the perishable nature of nutritionally rich fruits and vegetables, especially in countries with limited storage and transport infrastructure.

What types of interventions and policies might result in more desirable nutritional outcomes in the course of agricultural transformation? The complexity of the issue implies that a multi-pronged approach is needed, one that will be highly context specific. For example, in Ghana the presence of “market queen mothers” who exert oligopolistic control over who and what is sold in local markets are currently a barrier to new entrants, but in theory could also be leveraged to introduce nutritionally rich diets. The role of education and behavioral change was widely discussed, but without proper incentives such programs will have limited impacts. Some participants suggested economic incentives to nudge individuals to more healthy dietary choices. Finally agricultural policies need to account for nutritional needs of consumers and may need to be reoriented encourage more diverse crop production.

How can the agricultural input market be made more efficient and responsive to the needs of farmers?

A key constraint to increased farm productivity, especially in SSA, has been low input use—both in terms of quality and quantity. A combination of government and market failures limit access to inputs—modern varieties, fertilizer and pesticides—in a timely and cost effective manner.

Consider the fertilizer market. Fertilizer application rates in SSA are only a quarter of what they are in Asia and an important reason why yields in SSA are so much lower. Investments and policies such as

extension services and subsidy programs have not been very successful. Subsidies, for example, can result in a short term uptake of fertilizer by farmers, but once removed result in dis-adoption. Subsidies have also been proven to be very costly for governments, and are not fiscally sustainable in the long run. A move towards smart subsidies and vouchers has not improved the situation much either, as it still results in inefficient use of fertilizers.

Some participants suggested that the reason for the lack of fertilizer uptake in SSA is likely due to the low response of crops to fertilizer applications. Agronomic limitations aside, imperfect markets—especially monopolistic markets—can also hinder efficient supply of inputs like fertilizer with private firms catering to only those farmers that can afford their higher monopoly price. While monopolies may be unavoidable due to scale economies, it does imply that governments need to use its regulatory authority to prevent monopolistic behavior.

Improved seeds are another input that is essential for raising agricultural productivity, but their adoption is limited by a number of factors. Several participants mentioned how high regulatory cost effectively prevents farmers from accessing new and improved varieties and discourages private sector investment in the seed sector. Harmonizing seed laws and freer trade have the potential to improve access, but these policies face challenges as it is difficult to get agreement that would satisfy the interest groups in all countries.

Access to better seed varieties depends on continual investments in applied R&D. Historically, public sector research has been key to providing new seed varieties. The private sector is playing an increasing role in a few countries in SSA, thanks in part to an improving policy environment. However, evidence presented at the convening suggests that private sector R&D remains small. There is also the concern that even with greater private sector research, technologies and crops relevant for smallholder agriculture will be ignored by private firms as they are unlikely to reap high returns for them. Public sector research will be a significant source of new innovations for smallholders but only if low research intensity—about 0.5% of GDP for much of SSA—can be increased to at least 1%.

How can we best explain the policy choices that different countries make with regard to agricultural transformation?

Policies play a key role for smallholder agricultural transformation as they can hinder or foster this process as well as influence the type of transformation that a country will undergo. During the past decades, most developing countries have changed their policies and moved from taxing the agricultural sector to supporting it. In spite of this general trend, there are major controversies regarding the policies that are most suitable to promote agricultural transformation. These controversies refer, for example, to the choice of policy instruments (e.g., input subsidies), the question of supporting small-scale versus large-scale agriculture, and the need for governance reforms in the agricultural sector. The final session explored the policy processes that are related to these controversies, paying special attention to the role of different policy actors, their interests and policy beliefs and their political strategies.

Policy interventions face two key challenges. First, the evidence to support certain policy systems change is often lacking made difficult by the fact that certain interventions can only be evaluated ex-post or are very context specific. Second, even where evidence exists to support a policy intervention, the political and/or the public support needed to carry out the intervention may not exist. In such situations, the Political and Public Will (PPW) framework allows the researcher to identify points of

convergence / divergence and how the two—i.e political and public will—can be aligned to yield desirable policy change. The use of the PPW toolkit can be an effective mechanism to resolve difficult policy choices involving climate change, land tenure and women’s rights.

The session concluded with a discussion on disconnect between which policies donor governments and institutions desire and the policies that are promoted by domestic political leaders. The case of mechanization in Ghana was given as an example, where domestic policy makers sought to introduce tractors through active government involvement while donors felt that it was best left to the market. To bridge this gap, there is a need to better understand the policy beliefs of both domestic and donor policy makers that acknowledges the genuine concerns that each may have. By promoting policy dialogue, common objectives can be identified and can be the basis for determining which policy instruments work.

References

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