

Discussant comments on “Emerging Land Issues in African Agriculture”

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Let me congratulate Thom Jayne and his co-authors on a comprehensive overview of emerging land issues in Africa. Resolution of these issues is clearly central to the successful transformation of the agricultural sector in Africa in terms of growth, poverty reduction, and sustainable management of natural resources. Even more fundamentally, it is critical to avoiding the growing number of conflicts surrounding land issues. The paper by focusing on people rather than land per se and drawing on a wealth of farm household data over many years provides an important complement to the recent media attention to “land grabs”.

There is little doubt that available land per capita is rapidly changing. My first exposure to Africa was over 40 years ago when I did my PhD thesis on Nigeria at a time when the population of that country was 57 million, and it was regarded even then as having significant areas of high population density. Today, Nigeria has nearly three times that number of people and by 2050, 40 years hence, the UN projects that it will have nearly 400 million. (For all sub-Saharan Africa, population has increased by about 500 million people over the past 40 years and one billion more are projected by 2050). Later I moved to Sierra Leone, where we carried out one of the first national level surveys of farm households. We were alarmed to find that the average fallow period was approaching 10 years, the minimum period regarded as necessary to restore soil fertility (each farm household was controlling around 16-20 ha). Today the fallow period has surely reduced well below that critical level. Unfortunately, it is very difficult to obtain reliable up to date information on fallow periods in Africa.

My comments will focus on the way forward for some important sets of conditions in what is a hugely diverse continent and elaborate on a major missing element of the paper, the poor functioning of land markets.

Structural transformation

There is general consensus that increasing productivity in smallholder agriculture has to be at center stage, a message we strongly endorsed in the 2008 World Development Report (World Bank 2007). Even though agricultural growth has accelerated to 5-6 percent in much of Africa the sources of that growth are troubling—land area expansion accounts for about three quarters of growth since 1991, while total factor productivity growth averages only about half of other developing regions (Fuglie 2011).

Still I believe we need to be careful translating the Asian green revolution experience of structural transformation to Africa for at least two reasons. First, Africa is much more diverse so that the path of structural transformation will differ depending on initial resource endowments. In the humid forest areas of Africa, tree crops rather than cereals, will play a much greater role. Just as in Malaysia and the outer islands of Indonesia, structural transformation through tree crops oriented toward exports is already well advanced in Ghana and, until the civil war, in Cote d’Ivoire. Already Ghana has met the millennium development goals of halving hunger and poverty, and cocoa has been a prime mover (Kolavalli and Vigneri 2011). Second, in most African

countries, a much higher share of African staples are non-tradables (sorghum, cassava and in inland locations, maize) than in Asia. This means that lower food prices may play a larger role in translating productivity increases into nonfarm growth and poverty reduction. In Asia, food prices did decline in real terms but at a slower rate than the increase in agricultural productivity so that both farmers and poor consumers were beneficiaries. This will be much more difficult to manage in Africa (Lipton 2007).

Priorities by population density

Jayne et al. have rightly highlighted the challenge in **high population density areas**. Pathways out of poverty in these areas will combine high value agriculture (horticulture, intensive livestock rather than food staples), increasing nonfarm employment and out-migration. In countries with a rapidly growing and maturing nonagricultural economy, such as Kenya, the need to supply an urban food demand that will quadruple over the next 20 years should provide the opportunity to exploit each of these pathways, especially if priority is put on upgrading education and skills of rural people. The big challenge is in areas of high population density in relation to the agro-climatic potential that are not well connected to markets, as in some of the Sahelian countries and more remote areas of Ethiopia.

Low population density areas of 25-75 persons per km in the savannah zones are already the main breadbaskets in many countries and could be breadbaskets to the world in the future since these are the areas where more land could be brought into production. The puzzle is why have these areas not taken off through the emergence of entrepreneurial small- and medium-size commercial farmers, as have similar areas in Northeast Thailand (World Bank 2009). In a number of countries, improved maize varieties and fertilizer have been fairly widely adopted, but these maize revolutions have not been sustained, largely due to the inability to transition from state to private-sector in input, financial and output markets. As Jayne et al point out, even as countries have increased expenditures on the agricultural sector, public investment in rural roads, R&D, and extension continues to be shamefully low.

In addition, insufficient attention has been given to labor saving technologies in these areas to allow farmers to manage a larger land area. Mechanization of tasks such as land preparation through the emergence of tractor rental markets as has occurred in other developing regions has been very slow, while outside of a few pockets such as Zambia and Burkina Faso, conservation farming is new to the region. Why is this? I hypothesize that a major constraint on adoption of mechanization and other labor saving technologies has been high transaction costs in accessing underutilized land at the community level. Informal land markets are emerging but often with strong kinship ties and transaction costs. There is a large research agenda in these areas to better understand at the community and household levels the interface between demographic changes, land allocation, land access, fallow management, and soil fertility. This needs to involve anthropologists and agronomists, as well as economists, and build on pioneering work from the 1970s and even the colonial era (e.g., Lagemann 1977; Allen 1965).

Finally there are areas of **very low population density** under 25 person per km estimated for the World Bank by IIASA has having some 200 million ha of land suitable to bring into cultivation (Deininger and Byerlee 2011). There are of course

reasons why these areas have not been cultivated—usually related to a combination of poor infrastructure, problem soils, or disease. However, none of these are insurmountable with appropriate policies and large investments, as shown by the Cerrado of Brazil. Given scarcity of labor in these areas, a strong emphasis on labor-saving technologies or in-migration will be needed complemented by capital and technology. The current wave of private investors of course offer one way to open up some of these areas, especially if they are willing to co-finance some of the infrastructure and technology development. An estimated 30-50 million hectares have been transferred over the past five years to outside investors although most understandably are focusing on more accessible areas, where there is likely to be conflict with existing land users. Investors have been also highly heterogeneous in terms of origin, expertise, and focus commodity, and the benefits and risks are likely to be correspondingly heterogeneous. Some investors such as the Asian investors in oil palm, a crop that originated in Africa, could, if responsibly managed, provide much needed capital and technology as well as a large number of jobs and outgrower opportunities that could serve as key drivers of structural transformation. However, it is not clear that large-scale fully mechanized food crop farming will succeed due to lack of technology as indicated by the dismal record since independence in Sudan, Tanzania, Nigeria and elsewhere. Further, development impacts will be limited given the lack of job creation, few spillovers to local communities and substantial risks of treading on existing land rights, given poor delineation of those rights and the difficulty of implementing them.

Formalizing land rights to get land markets moving

All of this brings me to my final comment which is I feel an important gap in the Jayne et al paper. I do not know any area of Africa where land markets are working well. Reduced transaction costs in land transfer and more secure tenure for both smallholders and investors would allow entrepreneurial smallholders to scale up, facilitate migration from very high to low density areas, and provide an exit strategy for those with nonviable holdings. Because land markets are not working, capital and labor markets do not work well either. About 80 percent of land is currently under customary tenure with unrecorded rights but this system cannot meet the increasing pressure imposed by population growth and commercialization. A prerequisite is to recognize customary rights, record those rights (especially women's rights), and make land transactions fully voluntary and transparent. In high population density areas, individual rights are generally preferable since farmers are already using a permanent cultivation system. Indeed, clearer definition and recording of land rights is critical to maintaining peace and stability, especially with in-migration, as shown by the tragedy of Cote d'Ivoire under the pressure of expansion of cocoa (Woods 2003). Fortunately, some countries such as Mozambique, Tanzania and Ethiopia are recognizing this challenge although implementation is too slow.

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