“African Agriculture—What Do We Not Know? What Do We Need to Know?”

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Africa clearly matters to the community of development professionals working on agriculture. Many important topics vie for our attention and tonight’s banquet address could have been devoted to many with good justification. The range of potential issues reminds us of the intellectual richness and enduring relevance of our profession. For the decision to focus on African agriculture, and the invitation to me to share my views on the topic, I sincerely thank the organizers and all who have come to participate.

I hope to do three things tonight. I would like to share with you some of the excitement of working on African agriculture now. Many of you are already involved, and you know that it really is quite a remarkable time. Secondly I will reflect a bit on how what our profession has learned about agricultural development relates to the issues that Africa faces now, and highlight some areas in which we need to know more. And finally, I would like to propose a strong engagement of the agricultural economics profession with the developmental effort under way. There are intellectual and practical gains to bringing the wealth of the American profession to bear on the effort to accelerate Africa’s agricultural growth. We will need to bring some new thinking to the question of how best to do that.

African agriculture is back in the public eye after a hiatus of about thirty years. The story of interventionist programs after independence that were largely dismantled during structural adjustment in the 1980s is quite well known and does not need recounting. One might reasonably have expected that the mixed impact of reforms on agricultural performance would have been assessed and appropriate successor measures identified during the 1990s. That this did not happen can be explained largely by the political firestorm sparked by structural adjustment. The development landscape in the 1990s and early 2000s in Africa was a scorched terrain on which only debt relief under the HIPC programs and investments in health and education could take root. Schools and clinics tangibly countered the perceived callous disregard for the human cost of structural adjustment. The political economies of both donors and recipients aligned behind the simplicity of debt relief under HIPC plus budget support for health and education. Global food prices remained low, and agriculture as a productive sector engaging the poor simply fell off the table. Investments in agriculture by African governments and development partners plummeted.

The experience of the late 1980s and 1990s illustrates an enduring truth about African agricultural development—political economy, both global and national, matters. We are now in a political upswing, and must make good use of it. During the extended downswing, African farm households and public agricultural institutions consumed their capital, and millions of Africans struggle today with the legacy of decapitalization. Hans Binswanger and Madhur Gautam recently presented visibly abashed Tanzanian

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1 Dinner address delivered at The International Speaker Series and Banquet, AAEA Annual Meeting, July 26, 2010, Denver, Colorado.
policy makers with survey data showing that in 2007 89% of farmers did not own a plow, and 10% did not even own a hand hoe.²

The decades were not totally lost for rural development, however. Rural literacy improved when the schools were built. Pupils leaving elementary school and their parents are now demanding secondary education. Battles with malaria and AIDS are far from won, but one shudders to think what the mortality and morbidity would be without the investments of the past several decades in health.

The emphasis on health and education in rural areas promoted decentralization with important benefits for rural development more generally. Delivery of expanded programs required increased capacity on the part of local officials, intergovernmental fiscal systems that could take resources down to districts and communities, and greater involvement of citizens in monitoring delivery of the promised services. Multi-party elections are now the rule, rather than the exception, and rural constituencies are active. The emphasis on accountability for service delivery, democracy, and governance has shifted political power to subnational levels. Cellular phones are increasingly evident in rural Africa, and the payoff to connectivity is just starting to be felt. I was recently in a very remote part of the DRC where the road was being constructed literally ahead of us as we drove, but my blackberry worked most of the time. Changes in literacy, decentralization, and innovations in communications have brought a rapid empowerment of African rural people—so much so, and so rapidly that we have to rethink our models of urban bias in policy in poor countries. And lastly, but far from least, although almost half of Africa’s countries are still fragile states or recovering from conflict, open fighting has subsided in many areas enough to allow people to return to villages and plant their fields.

Thus the context for African agriculture changed markedly and largely for the better during a period of political neglect and ruinous decapitalization. The more favorable dimensions of the context—that is, reduction of the implicit taxation of key commodities, improved education and health, and greater connectedness of rural areas with the rest of society probably explain the modest improvements in growth that have taken place in recent years. Africa’s agricultural performance, whether measured in aggregate or per capita, has improved for a period perhaps as long as the last ten years. Keith Fuglie’s work assessing trends in growth of output and productivity in Africa shows growth in gross output in the 1960s, stagnation in the 70s, modest recovery in the 80s and 90s, and continued modest growth in the 00’s, the latter somewhat augmented (to 3.25%) when favorable price effects are added in. Fuglie confirms the findings of others that growth has recently improved, but that productivity lags. Most recent output growth has come from expansion of area, rather than growth in total factor productivity or increased use of modern inputs.³

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³ Keith Fuglie, “Agricultural Productivity in Sub-Saharan Africa.” Paper presented at the Cornell University Symposium on The Food and financial Crises and Their Impacts on the Achievement of the Millennium Development Goals. May 1-2, 2009, Ithaca, New York. To summarize the work in this way does not really do justice to its breadth and scope, since at least half of his effort was devoted to assembling a set of statistics that were worth the analysis. Few researchers have the patience and resources to correct the official data as well as
On the ground stagnant productivity looks like village after village with exhausted fields and recently cleared land, sometimes obviously former forest, grassland, or almost vertical slopes, on which households work one or two hectares and harvest less than two tons of cereals. One could say that this is the unchanging African countryside. Indeed, some of our colleagues who return to work in Africa after an absence in other regions remark with discouragement that technology has not changed, yields have not grown, and the villages that they used to know now have twice as many people, most of them children.

Stagnant yields and unchanged technology mean that costs of production cannot come down. African populations are increasingly concentrated in megacities on the coast, while food production remains inland in the hinterland. Demand is thus shifting precisely to locations where African women working with a short hoe must compete with titans of global agribusiness. Fortunately regional cities and towns located away from the coasts are also growing, and markets are increasingly constrained by supply, rather than demand. But it is a stark fact that the African smallholder’s competitive advantage of isolation is eroding as population shifts to coastal urban areas and roads move inland.

African producers at the outset of the 2010’s thus find themselves still poor, more numerous, integrated to varying degrees into markets that function poorly and with high costs, receptive to new information but not always able to act on it, more unsure than in the past about weather and prices, periodically wooed but only intermittently served by politicians, and largely limited to traditional technologies and practices. This may not sound like a drumroll or opening bars of an exciting next movement, but in fact it is because public opinion has shifted. Agriculture is now recognized as central to Africa’s development. Many analysts, including the authors of the World Bank’s World Development Report *Agriculture for Development* see significant growth opportunities in the sector. Several vocal agro-pessimists, most prominently Paul Collier, argue that the odds are simply too strongly stacked against the sector. They assert that even though agriculture is obviously important and the neglect of past decades was a mistake, it is one that cannot be undone at reasonable cost; i.e., that decades of decapitalization and cumulative lag in technology have simply taken African agriculture out of the game.

Here, again, political economy matters. I happen not to agree with Collier’s analysis and I think he misunderstands much about rural Africa. But what really counts is that African governments disagree with him, and they are in charge of their agendas. When presented with Collier’s agro-pessimism, an African Minister commented, “This is not the Africa we live in.” And for the moment at least, donors and development partners see the importance of agriculture in Africa, both for growth and food security. We, the analysts and the development practitioners, have to seize the professional moment and make it irreversible.

African governments are willing to return to agriculture and even eager to do so, and this is where the agricultural economics profession comes in. Many public officials in Africa will say, “Of course we should analyze them; nor should they have to. We will not have the requisite rigor in analysis of African agriculture until the present broken system of statistical reporting is fixed.

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5 See, for example, http://www.africanagricultureblog.com/2009/10/peasant-agriculture-is-incompatible.html ref
invest in agriculture. We knew this all along, and it was the donors who forced us out”—and that was in fact the effect, if not the intent, of the HIPC programs and the emphasis on health and education. Many heads of state, however, instinctively seek to solve an agricultural problem by returning to instruments of intervention that did not work in the past. The agricultural agenda of the 1980s is not the one that African policy makers should return to now. The enduring attraction of fertilizer subsidies, directed credit, agricultural banks, tractors, indicative prices, and all the other policy paraphernalia of the 1980s is a genuine puzzle to professionals, since the many ways in which they do not work have already been well counted. The fact that such programs provide rents and political patronage to politicians who now need both undoubtedly explains part of the attraction, but in my view not all. The greater appeal of the interventionist stance is their apparent simplicity and logic, at least to nonspecialists. In democracies what politicians understand matters. Moreover, TV footage of a President handing a bag of fertilizer to a farmer communicates better than does a regression showing that this gift may make society, and perhaps even the farmer, less well off.

No country has yet marched resolutely down the path to the 1980s, but the recycled ideas recur regularly in policy discussions. Lessons that agricultural economists have derived from the past and from experience elsewhere are very relevant when well packaged for the current debates. Work of independent analysts is understood to be relatively objective, and not clouded by the ideological arguments between the borrowers and the international financial institutions that are the lingering legacy of structural adjustment. It goes almost without saying that Africa needs an active and large contingent of agricultural economists fully integrated into a global profession. In all of the now developed countries, agricultural economics as a profession was very strong when agriculture employed a large share of the labor force. And those shares even at their heights were probably half the employment shares in most African countries today.

We also need new research, but the pace of activity will not allow us to wait for it. After decades of neglect, politicians are willing to recognize a mistake and fix it, but they want the fix to be fast. There is simply no tolerance in the system at present for statements such as, “It’s more complicated than just handing out inputs....” or “We need to study this....” Heads of state want to double production in three years maximum—better two. Donors want to pledge large sums for African agriculture at G8 meetings in July, and have shovel-ready programs within nine months. From a professional perspective this preoccupation with speed is sobering and worrisome, since it calls to mind past great leaps that turned out badly. But speed is in fact needed. Without it African agriculture will fall further behind. Moreover, we play with the political hand we are dealt—rarely do we have the opportunity to select our cards.

Despite the “just do it” attitude, there is now a genuine receptivity to advice and assistance, and this creates a tremendous opportunity for the agricultural economics profession. I would like to turn now to review some of the main messages from the past five decades of agricultural economics research, and consider how they help us answer today’s questions for Africa. As I embark on this review, I am very encouraged to report that the body of knowledge about agriculture and development with specific emphasis on Africa is growing, at least as measured by numbers of publications and articles in them. I asked an assistant to do a quick quantitative check to see the prominence of attention to Africa in the
literature on agricultural development in recent decades. Given the decline in investment in agriculture by the donor community, I had expected that interest in agriculture and development as a topic of economic research would also have declined. It did not. The number of major journals devoted to economic development increased from two in the period from 1969-1979 to five in the period from 1999-2009, and the proportion of articles in them devoted to agriculture increased from about 7% to just over 16%. A separate count of the journals devoted to agricultural economics shows an increase from two in the period 1969-1979 to eight in 1999-2009. The proportion of articles addressing international development in these agricultural journals increased from less than ten percent in the early period to twenty percent in the later. Although attention to Africa was very slight in the early period, by the later almost half of the work on development in agricultural economics published in these major journals addressed Africa. Monographs and major studies published in book form are in addition to the professional periodical literature. Thus while we can be sure that we as a profession still do not have all the answers, we can be comforted by the knowledge that it is not for lack of trying.

As I turn to the content of the work, I am guided by the excellent summary paper that Chris Barrett, Michael Carter, and Peter Timmer prepared for the anniversary issue of the AJAE. They guide us through the decades by grouping the work into three grand themes. The first covers the role of agriculture in the broader developmental process, including intersectoral linkages, structural change, the political economy of public intervention, and the enduring preoccupation with food security as a public policy issue. A second grand theme is that of dynamism in the agricultural sectors of poor countries; i.e., where technical change comes from and what determines its direction and pace. A third theme focuses on the household and individual and explores factors affecting inclusion in the growth process, exclusion, and the distributional impact of agricultural growth. Each of these three themes is applicable to Africa today. Rarely has a professional discipline had such an opportunity to be relevant.

On the grand theme of agriculture’s contribution to economic development, we no longer need to spend quite so much time on advocacy for the importance of agriculture in Africa. The arguments have been well stated recently, and the spike in global food prices in 2008 reinforced the message that agriculture still matters. Those who are not yet convinced probably will not be. But it does not hurt to remind ourselves that the challenges facing Africa now are enormous and in some respects unique in world history. The continent must contend simultaneously with its economic and demographic transitions, and do so in the context of globalization and a changing climate. Agricultural shares of the labor force remain very high, and growth of employment in other sectors lags. Aggregate growth is driven, in addition to agriculture, by extractive industries that generate little employment or domestic earnings. The ability to absorb the enormous bulge of young people joining the labor force now will depend on agriculture during this generation. Agriculture’s growth and performance are thus critical to welfare and social stability on the continent. We need to know whether and how the linkages between farm incomes and off-farm activities operate in different parts of Africa now, how they can be augmented to create jobs for rural young people, and how school leavers can best be equipped to take advantage of them. We need to understand more about price transmission from global to local

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markets, and the interplay of local and global factors in causing price volatility. We need to know how the new global institutional framework to address climate change will affect the economic landscape for African agriculture. And we certainly need to understand the complex political economy of agricultural policy in African states, and particularly why improvements in sectoral policy, although significant, have lagged those in other regions.  

The first grand theme could keep an entire profession fully employed for the foreseeable future. If I don’t spend much time on theme in this lecture, it is because I know that there is already work on these topics under way. I want to devote more time to the second grand theme, and ask, “Where does dynamism in agriculture come from, and how can rapid growth be stimulated?” In the short run the quickest gains will come from closing the yield gaps. Known technologies can be made available to farmers for wider adoption. The fact that promising known technologies have not been widely adopted confirms our knowledge that dissemination is not necessarily frictionless or irreversible. Micro level studies show that the spread of new technologies is constrained by knowledge, risk, and profitability. Nonetheless a number of African countries already have experience with programs that assist farmers to select new technologies that they are willing to adopt, and combine technical advice with cost sharing to speed adoption. Probably more African countries have some variant of these programs than do not. Yet even where the programs are scaled up and have functioned for some time, for example in Uganda, the data on impact suggest that more of the increased income comes from shifts in crop composition than from increased yields. Thus even on a relatively straightforward proposition such as closing the yield gap, the results are not entirely as expected. New work on adoption of technology in Africa could support a bevy of master’s dissertations tracking the slopes of the S curves, characteristics of early and late adopters, and what happens to incomes as a result. 

Closing the yield gap can work in the short run, but it will not be sufficient to fuel longer run sustained growth. Reinvestment on a substantial scale will be required and has already started. In the early 2000s a number of African countries under the auspices of the New Partnership for Africa’s Development (NEPAD) and the African Union began preparing a framework for reinvestment in agriculture called CAADP, the Comprehensive African Agricultural Development Program. CAADP is a platform of advocacy for increased investment in agriculture, and a procedural guide for how to make the investment effective. The CAADP framework argues that scaled-up agricultural public spending should be part of good budget planning and execution. Over time the many disparate and fragmented interventions of separate development partners and national agencies will be increasingly transparent and incorporated into a consolidated budget framework. The comprehensive nature of the framework recognizes that no single entry point is sufficient and that returns to investments are interrelated. Programs should address simultaneously issues of land and water (including irrigation), infrastructure and access to markets, agricultural technology, and risk and vulnerability. Countries are encouraged to give attention to all four building blocks of comprehensive programs, although it is recognized that specific programs and relative emphasis will vary among countries. Finally, the CAADP framework emphasizes process as well as expenditure levels and technical design of programs. Preparation of a

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8 See http://www.nepad-caadp.net/CAADP
country’s program under the CAADP process is intended to be consultative and inclusive of a range of relevant actors in the public, private, and NGO sectors.

CAADP has recently received attention as the framework for countries to benefit from pledges of increased assistance to agriculture made at the G8 meeting in L’Aquila in 2009 and subsequently. We are about to hear a loud crash when expectations for support meet the reality of actual funding levels—and that will probably be in about October of this year. Available resources are far lower than pledges made at L’Aquila, and the African investment plans designed with great effort in response to L’Aquila exceed both the pledges and the available funds. But the framework underlying the CAADP process is much more important than the amount of external funding. It establishes the basic principles of good programming for agricultural public spending, and we will need to be sure that the principles survive any disillusionment about levels of funding.

Underlying the CAADP agenda is an assumption that reinvestment will shift agriculture to a higher growth path. This is probably not wrong, but it is not specific enough to be right— it matters greatly what the money is spent on. The reinvestment is just starting, and the central question for African policy makers and their partners is: how can increased public spending be most effective in generating agricultural growth?

The question falls squarely within the second grand theme of Barrett, Carter, and Timmer’s paper, and the literature on the topic is enormous. It is therefore a bit puzzling that many observers turn so quickly to the example of the Green Revolution in South Asia, and suggest that Africa should have one of those. The South Asian Green Revolution is perhaps attractive because of its perceived speed—India was considered a long-term ward of the international community in the late 1960s, and by 1980 was both exporting and struggling to manage a mountain of surplus rice. The perception of speed is somewhat tempered by the gap of several millennia between the investments in irrigation and the varieties that responded to it, but once the irrigation and varieties came together, the impact was indeed very fast. Most of the action in the Asian Green Revolution was in yield increase, and this is understood to be largely within the realm of science. In the most facile reconstruction of the Green Revolution, the CGIAR discovered new seeds and gave them to India, much as Jack found magic beans, his mother tossed them out the window, and the following day a beanstalk stretched to the sky that vanquished their food problems forever. Many studies have documented that the Asian Green Revolution was many years in the making and involved transformational changes in crop management practices, farming systems, institutional support structures, and the very economics of agriculture, but the popular perceptions of it remain thoroughly connected to speed, biology, and the pivotal role of science, rather than farmers.

Biology is without question important for agriculture, and widespread adoption of known improved varieties could indeed be the trigger that precipitates a shift to higher growth. But lessons of other episodes of rapid agricultural growth suggest that biology is not always destiny—or at least, not biology alone. What about England’s turnip revolution in the 18th century, during which the shift from the three-field to the four-field system, introduction of clover and turnips, and change in property rights through enclosure brought transformative improvement in soil fertility? This was not a case of higher yielding wheat and rye, but a much more complex change in farming systems and property rights
precipitated perhaps by the diffusion of technology from Flanders. What of China’s introduction of the household responsibility system in 1978 coupled with improved incentives for producers and subsequent investments in agricultural science? Here institutional changes preceded the subsequent massive investment in agricultural science, and both were needed for sustained success. Or the upward discontinuity in American agricultural growth between 1935 and 1940 that has been sustained since then? Bruce Gardner tried to identify the precipitating factors, and concluded that even with the wealth of data available in the US, one cannot definitively say which of the plausible candidates deserves credit (or blame, depending on how one feels about today’s American agriculture). Investments in infrastructure, science, mechanical innovation, a growing non-farm economy, and governmental support programs all contributed, although the disaggregated data suggest that the latter may not have been very important. Finally, what about Brazil’s emergence as an agricultural powerhouse through investments in infrastructure, science, and opening of a new frontier of land? These episodes of rapid agricultural growth have taken place in settings with a wide range of factor endowments and initial conditions, and have featured a varied mix of changes in property rights, institutions, policies, biological science, mechanical technology, human capital, and physical infrastructure.

To understand change in agriculture, we traditionally turn to the work on induced innovation, contributors to which argue that when factor endowments and initial conditions differ, paths of innovation will also differ to relieve the constraint most binding in a given situation. Africa exhibits the full range of initial conditions that one can find globally, with the exception of the climatic constraints of extreme temperate zones. One would expect thus to see Africa as a laboratory of different paths of agricultural innovation, with the Sahelian countries addressing scarcity of water, the densely settled countries achieving higher yields, and the land abundant countries adopting mechanized farming on larger holdings.

The theory of induced innovation helps us understand why dynamic agricultural systems differ, and why, for example, rural Australia does not look like Viet Nam. The theory helps us less when our task is to understand why an agricultural economy is less dynamic during one period and more in another, or stuck altogether. Theories of induced innovation tell us about the direction of change, but not very much about the pace. Nor do they help us understand what holds economies back from an apparently obvious path of innovation, or what breaks through the blockage. Changes in relative factor prices tend to happen gradually, while shifts in agricultural technology and growth can be quite rapid, and the theoretical work does not yet explain why.

Recognition of the heterogeneity of Africa in light of theories of induced innovation immediately puts a new perspective on the proposals for an African Green Revolution, when this is understood to mean emphasis on discovery and adoption of new high yielding varieties. Where land is relatively abundant for grazing and crops, emphasis solely on the biology of increased yield will overlook potential gains from the livestock sector and from mechanical, as opposed to biological, technologies. And the potential gains from improvements in mechanical technology in Africa do appear to be neglected. Part

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of the justification for emphasis on biological technology is the oft-stated observation that the land frontier has closed, and future increases in production need to come from yield increases. The recent appearance of foreign investors seeking large tracts of land in Africa and readiness of many governments to accommodate them suggest that pronouncements about the closing of the land frontier may be premature.

In many countries land is still available, but it is not worked because households do not have the animal draft power or mechanization to handle more than the area that the family can farm by hand. Problems with animal health constrain draft power and capital constraints keep the machines out. In other cases the current property regimes constrain access of local people to new holdings, but a major external investor can garner the attention to overcome the constraint. Just at a time when large numbers of African young people with agricultural experience are joining the labor force, the land that could secure their futures may pass under long-term rights to foreigners because constraints of capital and property rights have caused it to be idle.

A simple solution to the problem of lack of mechanization—and one that creates great photo opportunities—is for governments to hand out tractors under public programs. Like many simple solutions, it does not work. The tractors are given to the wrong people, break down, lack the right attachments, are too expensive to keep greased and fueled, and sit idle for these and other reasons. Rusting blue tractors from an Italian development program dotted the Eritrean landscape when I used to travel there several years ago—they are probably still there. Moreover, poorly designed public programs to promote mechanization can easily subsidize large scale equipment that pushes labor out of agriculture, rather than small and medium scale equipment that brings land in. On the other hand, the adoption of small-scale two-wheeled tractors in South Asia is an example of public support for a mechanical innovation that has worked very well.

Similar programs in Africa could bring down the dimensions of the capital constraint to a size that some smallholders can handle even now. One way to do this is for intermediate equipment to be made available commercially through sale or leasing arrangements similar to the zip-cars in the US. The intermediate solution can be imagined and designed, but it has not yet happened. Why not illustrates that the forces that propel innovation once started are not necessarily the ones that help it off the starting block. Discovery of the relevant technology requires market research into the farming activities most amenable to mechanization, the preferred scale, and the range of technologies already available, if any. Machinery probably does exist or could be adapted, but in the absence of an active market for it, the research has not been done. Leasing franchises with innovative financing arrangements would have to be established. Some training and promotion would be required. Customers might initially need to be enticed with discounted prices or matching grants. The initial phase of mechanization would thus require public support, but it would have to be well designed and finely calibrated to avoid falling into the bad habits of handing out tractors or establishing state-run machine tractor stations. And most African governments at present, even in the land abundant countries, are focused on subsidizing fertilizer, rather than promoting mechanization. Donors could play a very constructive role and I expect that we in the World Bank will do more of this in the future, but many seek to target the poorest of the poor, and this is not usually the client group for mechanization.
This short digression into the missing innovations in mechanical technology in Africa can bring us back to the relevant lessons from the Green Revolution in Asia. The key lesson may be not that Africa needs high yielding varieties, although they will certainly be welcome. Rather it may be that Africa needs a deeper looks at the many constraints and a more imaginative effort to put money behind removing them. Asia in 1970 was long overdue for the high yielding dwarf varieties that were the core of the Green Revolution technology. The fact that the innovations were needed and appropriate had not induced them prior to the imaginative work of Norman Borlaug’s team at the CGIAR centers and the herculean efforts of Indian agricultural scientists led by Dr. M. P. Singh. The key constraints and corresponding innovations for Africa are still in the process of discovery, and once found, they will most likely reflect the heterogeneity of the sub-continent. For example, the biological research on GMOs is focusing on reducing costs and improving pest management and drought tolerance, as well as yield increases. Continued efforts will require the best minds of the global agricultural profession, and this includes the agricultural economists. Agricultural economists can question the direction and pace of change—what else should be happening in addition to fertilizer and higher yields?—while the biologists, agronomists, veterinarians, and engineers come up with specific innovations.

Once a framework for dynamism is understood, the question of how African farm households fit into it becomes the key question—how do people make changes at the most basic level, and how are they affected by them? This is the third grand theme of the summary paper. The body of literature on how households and individuals engage in market transactions is quite large but less helpful than it might be. Much of the work posits a smallholder who produces only for own consumption, and asks why that is the case. The popular coverage of African agriculture, although not the professional literature, usually assumes that commercial farmers must be large, and that smallholders produce for subsistence. The conflation of farm size and market orientation feeds a misunderstanding of subsistence as an absolute rather than relative concept.

The smallholders that we encounter through programs of the World Bank occupy a continuum between those less and more engaged in market transactions. Very few are totally removed from a monetary economy. Most smallholders sell something, and would sell more if they had more and could get it to market at reasonable costs. Bruno Losch’s survey data in Mali, Senegal, Madagascar, and Kenya show a consistent pattern of less engagement in markets on the part of poorer rural households and more on the part of richer, but even the poorest households sell from twenty to forty percent of their production on average. Moreover, many rural Africans are net buyers of food, at least for part of the year, so they are certainly integrated into market transactions.

The literature explaining autarchic behavior of smallholders, therefore, seems quite abstract and not relevant to practical applications in Africa now. Producers who engage in markets very little have identifiable needs that can be served by programs combining safety nets with resilient, low input crops and better breeds of poultry and small ruminants. We should better understand the size of this group and characteristics that will help target the appropriate programs. The Bill and Melinda Gates

Foundation has recently funded rural socio-economic surveys in several African countries that will put data into the public domain for analysis on this question. The work should help us revise our definition of a subsistence farmer—poor farmers may be less integrated into markets than their more prosperous neighbors, but they are not at home spinning and weaving and making their own shoes.

Smallholders already engaged in markets and interested in becoming more so need a different set of programs, the proper design of which requires an understanding of decision making at the household level. This group is very heterogeneous in terms of farm size, product mix, and financial sophistication. We need a better characterization of this group, and clearer understanding of the constraints they face in becoming more commercially active. The issues we need to understand are as much sociological as traditionally economic, and have to do with roles within the household and dynamics within groups. The commercially oriented African smallholder will be a key player in a more dynamic African agriculture in the future, and we will have much to learn about his and her behavior.

This brief tour through the literature of agricultural development suggests much from past work that is relevant and much more that needs to be investigated. The quality of country-specific investment programs and monitoring of impact will be only as good as the analytical effort that accompanies them. The US has taken a lead among the G8 and bilateral partners in advocating and funding the scaled up investment. The American agricultural economics profession should be correspondingly visible and engaged, along with African colleagues, in the effort. The thinking about how to make this happen needs to advance quickly.

We in the World Bank are not standing idly by, and I have not come here this evening to suggest that others work because we intend not to. On the contrary, we have more than doubled our new lending on an annual basis for African agriculture in the last two years, from less than USD 500 million in the period FY05-08 to about a billion now. In addition we manage trust funds for a number of purposes, such as supporting the peace agreement in Sudan. We have thus significantly increased the financial resources we are providing, and other development partners are doing so, as well.

But with our increased financial exposure comes increased risk, both for us and for our clients. We do not have the people or money to increase the analytical work commensurately with the increased lending. The World Bank is still a source of knowledge about development, and our periodical publications and sponsored research are very important at the strategic level—for example, the recent volumes by Kym Anderson and Will Masters on agricultural distortions carry critical messages on the importance of continued policy reform for the success of Africa’s reinvestment in agriculture. But we have flat budgets and an expanding program of lending. We hire good young agricultural economists with fresh PhDs and analytical experience, and then we assign them to operational work where they do not have time to think or read, much less engage in serious analysis. At the operational level we simply do not have the people or skills to provide the analytical support that African clients need as they embark on the agricultural scale-up.

The engagement of African professionals through instruments such as the CAADP multi-donor trust fund will be very helpful, as is IFPRI’s analytical effort through the ReSAKSS (Regional Strategic Analysis and
Knowledge Support System) program. But more is needed, and the American agricultural economics profession should take a leading role. The traditional instruments for this engagement are USAID’s Collaborative Research Support Programs, and they are being scaled up. This will be helpful, but it may not be enough or sufficiently innovative.

The scaled up presence of the US in the financing has necessitated changes in the ways the US interacts with clients and partners, and the same will be true for the analytical work done by the Land Grant universities and others. The developmental programs of the US have traditionally been implemented in parallel to country systems and efforts of other partners. This has come about in part because US programs were small (in contrast to the food relief programs), and because Congress constrains the allowable instruments of support. The Obama administration is making real efforts to change the magnitude and mechanisms for delivery of aid. This is very welcome and we see it in many ways on the ground. US representatives are showing up at sector working groups in country and participating actively. Although the US is still unable to join in budget support operations or basket funding arrangements, efforts are under way to make the parallel financing better aligned to other activities. This is absolutely essential if the US is to bring large amounts of money constructively.

The effort is still a work in progress, and the degree of integration to be achieved is yet to be seen. The American analytical effort, whether implemented through CRPSs or other mechanisms, should be aligned to the broader coalition of partners, and not come in through the narrower door of the US effort. How this can best be done, and what architecture in addition to the CRSPs should be used merits some serious and creative thinking. Leaders in the American profession should take a proactive role in exploring how best to structure their contribution and how to pay for it. We in the international organizations can offer some useful perspectives on the options, and will be happy to join in such a conversation.

I have tried to convey some of the excitement associated with African agriculture now. Money is back, and we have a wonderful opportunity and a sobering obligation to do our best to assure that it is well spent. We already have some of the best minds in the profession at work on the issues—we need more. A nascent pan-African agricultural economics profession is appearing—it needs to grow, be heard, and link with the global profession. Among the bilateral partners, the US is leading the call to reinvest in African agriculture. The American agricultural economics profession needs to be present with America’s political leaders and development practitioners to help provide strategic direction and to enrich the intellectual agenda.

I speak tonight from a profusion and perhaps confusion of roles and vantage points, but they carry a consistent message. I am an American tax payer, and I care deeply about the contribution that my country can make to development in Africa. I am a manager in the World Bank, and hence a partner to my own tax dollars. I care that the partnership be productive and useful for the intended clients, the rural poor in Africa. And finally I am a member of the agricultural economics profession. I am aware that we have a rare and unique opportunity to use the past work of our profession, and carry it forward into new creative areas. Speaking from all of these perspectives, I urge a very proactive and productive
engagement of the American agricultural economics profession in Africa’s agricultural renaissance. It has been a very great honor and privilege to address you tonight, and I thank you for your attention.