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# Empowering Rural People for Their Own Development

Hans P. Binswanger

**Elmhirst Lecture**  
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June 11, 2006

# **Empowering Rural People For Their Own Development**

**Hans P. Binswanger<sup>1</sup>**

## **Abstract**

This Elmhirst lecture first discusses the features of the institutional environment which allow rural people in low income countries to design, plan and implement their own rural development. These are divided into two broad groups: the institutional environment for rural development (environment for the private sector, communities and civil society, local government, and sector institutions) and the many factors governing profitability of investment in agriculture. While in many poor countries the institutional environment has improved over the last 20 years, the most poorly performing countries still have by far the poorest environment for local government in the world. Within an empowering institutional environment, the rate of agricultural and rural development is determined by investments of many different types that in turn depend primarily on the profitability of agriculture. The paper discusses the large number of factors which determine profitability. Few of these are under the direct control of farmers or agricultural sector institutions, but depend on governance and investments in other sectors such as trade and transport. In many of the poorest countries there has been considerable improvement in macro-economic management and sector policies over the past 20 years, but progress in international and intra-regional trade policies, in agricultural trade policies, in transport infrastructure, and in agricultural research and extension have been limited.

## **Introduction**

Between 1981 and 2001 the number of poor people living with incomes of less than a dollar a day in East and South Asia declined from 1234 million to 702 million, or a decline of 532

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<sup>1</sup> Hans Binswanger is a fellow at the Institute for Economic Research on Innovation at the Tshwane University of Technology, Tshwane, South Africa, and Chairman, Community and Enterprise Development Against Stigma (CEDAS Trust). This Elmhirst lecture is a revised version of his farewell lecture from the World Bank delivered on November 30, 2004.

million, of which the decline in China alone was 422 million. At the same time the number of people living with less than a dollar a day in Sub-Saharan Africa rose from 164 million to 316 million, or by 152 million. In percentage terms poverty declined in East Asia from nearly 58 percent to 15 percent, and in South Asia from 51 percent to 31 percent, while it increased from 42 to 47 percent in Sub-Saharan Africa (Chen and Ravallion, 2004). Much of these enormous differences in poverty outcomes were the consequences of sharply different performances in agricultural and rural development between the different Regions. More specifically Ravallion and Chen 2004 show that “rural economic growth was far more important to national poverty reduction than urban economic growth; agriculture played a far more important role than the secondary or tertiary sources of GDP. Rising inequality within the rural sector greatly slowed poverty reduction....Taxation of farmers and inflation hurt the rural poor; external trade had little short term impact.” (p.1). In an earlier paper, Ravallion and Datt (1995) had shown that in India rural growth is far more powerful in reducing national poverty (both rural and urban) than urban growth, while urban growth only reduced urban poverty.

During last four decades the agricultural performance of Sub-Saharan Africa has continuously decline: From 1961-64 to 1995-98 per capita agricultural production has fallen by 13 percent in Africa, whereas in Asia it has grown by 69 percent (Gelb et al. 2000, chapter 6). The recent poverty data and findings are perhaps the most powerful demonstration we have ever had that the fate of most of the world’s extremely poor people depends on their countries’ and regions’ performance in agricultural and rural development. The question of which factors which lead to rapid agricultural and rural development is therefore a central issue of development economics.

In my paper on “Patterns of Rural Development: Painful Lessons,” (1996), I discussed how the fields of Agricultural and Rural Development slowly overcame the ideological and scientific biases which ruled them until the 1960’s when I first became interested in these subjects. These biases had helped foster policies that inflicted untold damage on rural populations in the developing World. Development policies of countries and of donor institutions have over time been revised using the growing knowledge. This includes the agricultural and rural development strategy advocated by the World Bank, which was last subject to intense scrutiny and consensus building for the version published in 2003. The objectives of this lecture, are therefore not to

question the consensus views which our profession has developed over the last five decades or the World Bank agricultural and rural development strategy which derives from it. Nor will this lecture add significant new knowledge developed over the past few years. Instead the objective is to summarize once again what is known about how to foster agricultural and rural development in an easily understandable analytical framework. In addition, for some ideas I will discuss how they evolved in the World Bank, and how well they are applied by that institution for which I have worked for 25 years.<sup>2</sup> The lecture may therefore appear to be a bit World Bank centric.

The basic premise of this paper is that rural people have to be the key actors in planning and implementing their own agricultural and rural development (World Bank, 2002).<sup>3</sup> Despite our knowledge, farmers and other rural people in Africa and many other parts of the developing world are still blocked or hindered in doing this by poor institutions, policies, technology and insufficient human and physical capital. Therefore many rural areas are still underperforming. This under-performance is not caused by lack of knowledge, but usually by deliberate policies and institutions which tend to reduce agricultural profitability and dis-empower rural people, especially the poor and women (Binswanger and Deininger, 1997).

In “Painful Lessons” I discussed patterns of under-performance relative to agricultural potential. In this lecture I will concentrate primarily on one of these pattern of “agricultural stagnation” which today primarily includes the low income countries in Africa but also countries in other Regions such as Haiti, Nepal, North Korea, Myanmar, and others . I will also comment on countries in Latin America and elsewhere which have had a reasonable agricultural growth rates, but have “prematurely expulsed agricultural labor” and therefore failed to reduce rural poverty. These countries will be contrasted with experience from the recent high performers in Asia

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<sup>2</sup> The lecture covers a very large area of knowledge, and many important topics are only briefly touched upon. A first place to look for more in depth discussion would be the rural development strategy of 2003, as well as other references cited.

<sup>3</sup> “From Many Lands: Voices of the Poor” (Narayan and Petesch, 2002) let poor people speak on their own behalf, and they were particularly clear about being allowed to create their own institutions and organizations and manage their own development and the financial and other resources needed for that. The Sourcebook on Empowerment and Poverty Reduction Policy of the World Bank (2002) responds to this expressed desire and analyzes the full range of factors, policies and programs needed to respond to their desire to be fully empowered for their own development.

which, over the past three decades have benefited from the Green Revolution, and gradually improving institutional and policy environments

The key factors that empower rural people and therefore determine a country's performance in agricultural and rural development fall into two broad groups: (i) the institutional environment for rural development, including for agricultural development; and (ii) the policies and other factors which determine farm profits, and therefore agricultural investment and most of rural growth. The institutional environment and the policies not only determine rural growth, but also determine who can participate in agricultural and rural development, and the distribution of the benefits. This lecture will focus mostly on growth. Of course the distribution of the benefits is equally important, not only for its own sake, but also because of the mounting evidence that more equal income and asset distributions are good for growth and poverty reduction.

## **The institutional pillars of rural development**

In 1980, in a typical under-performing low income country in Africa and elsewhere in 1980, a young rural women (or man) who wanted to contribute to the development of her community found herself almost completely disempowered. Three of the five pillars of the institutional environment for rural development below were poorly developed: The first pillar, the private sector, was largely confined to small scale farming and other informal sector activities. Much of the marketing, input supply and agro-processing was in the hands of parastatal enterprises. The second institutional pillar, independent civil society organizations, community organizations, and even traditional authorities were highly constrained or suppressed. In the wake of decolonization, central governments had suppressed the third pillar, local government, or starved it of fiscal authority and resources. None of these three pillars were providing much opportunity for the young woman or man, and s/he had to find a way to join the central government or its centralized sector institutions if s/he wanted to contribute to development of her or his community. But these central institutions failed the rural sector miserably (World Bank, 1982).

The institutional environment for rural development and agriculture is the single most important performance issue in the under-performing countries. A well structured set of institutions can

tackle all the complex components required for rural development, from health and education to infrastructure, agricultural services, social protection, natural resource management, and more. Not only does the institutional environment determine who can contribute to development and how successful it will be, it also is the most important determinant of the distribution of the benefits. More specifically, where institutions are dis-empowering, they can be used by strong individuals and groups to direct the benefits of development to themselves, via elite capture.

Local development is a core component of rural development, although the latter also involves non-local components such as transport, processing and marketing activities. No institution by itself can carry the burden of local development. Instead the paradigm that has emerged gives equal weight to the private sector, communities and civil society, local government, and the sector institutions such as health, education and agriculture (World Bank 2004). This is a considerable departure from the past when different disciplines and sectors single mindedly advocated approaches involving only one of the four sets of actors. A broad consensus has been reached that local development (and therefore rural developments) has to be viewed as a co-production by all these four groups of actors. They need to take account their comparative advantage, delegate functions to the other partners in co-production, and reform themselves to be able to function under this new paradigm. Figure 1 illustrates this emerging consensus.

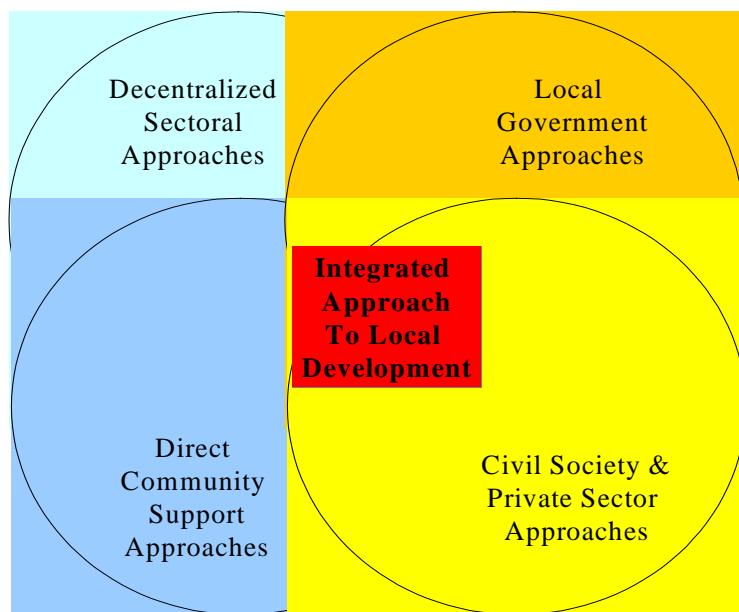


Figure 1. An Integrated Approach to Local Development

How such an integrated approach would be fostered in a particular country should depend on past history, what currently exists and can be built on, the prevailing traditions and cultures, and past history, and a diagnosis of the existing capacities and dis-functionalities. One can think of representing the capacities of each of the sectors in a country by the size of the circles in a country-specific variant of figure one. Different countries would have very different diagrams with some having very small circles for local governments while others would have small circles for their communities. Only country-specific analysis can reveal where the greatest weaknesses are and the best opportunities for improvements in the institutional environment. There are simply no universally applicable generalizations or magic bullets.

### ***Pillar 1: The private sector***

The World Bank's structural adjustment lending identified the suppression of the private sector, the underperformance of the parastatal sector, and the fiscal black holes they created as the root cause of the underperformance problem. While this view was partially correct, it was a far too narrow one, as we soon were to learn. The withdrawal of the parastatal sector did not lead to spontaneous and rapid growth of private sector replacements. Far too many other problems existed in what we now call the "business environment," including corruption, weak enforcement of contracts, over-regulation, poor infrastructure and services, all of which lead to an excessive cost of doing business. It is only in the last few years that we see cross-sector analytical work and programs which addresses the business environment in truly systematic way (World Bank, 2005b,c, Economic Commission for Africa, 2004, 2005a).

### ***Pillar 2: Communities, Civil Society and Social Capital***

In the early nineties the World Bank woke up to the important role of communities, civil society and social capital, which activists and academics had emphasized much before them. In the World Bank the new focus on communities came from two sources: Sector specialists in water supply and natural resource management had started in the 1980s to involve communities systematically, and found it to enhance project performance significantly; these lessons were progressively integrated into project practices (World Bank 1996b). The other source was social funds, which quickly discovered the power of communities to assist in project design and

implementation. In some of the early Social Funds, NGOs were used as intermediaries to substitute for the presumed lack of capacity at the community level. But this approach proved to be costly and has increasingly been abandoned in favor of direct empowerment of communities with knowledge and resources, while NGOs remain important facilitators and sources of knowledge. From letting communities participate in the design, finance, and maintenance of specific micro-projects, World Bank-financed CDD programs and social funds have moved on to truly empower them to choose, design, and execute a large range of micro-projects, by transferring both the responsibility and the co-financing resources for these projects to them. At about the same time social scientists discovered the merits of social capital and traditional institutions, and in many cases they are now systematically assessed and integrated into policies and programs to put in place a conducive environment for their participation and growth, (Economic Commission for Africa, 2005 a,b, World Bank 2003b).

Since the mid 1980s a broad range of NGOs started to sharply criticize donor-financed projects, policies and structural adjustment programs (Mallaby, 2004). Democratization in Africa and in other parts of the developing world created space for national and local advocacy and service NGOs (Economic Commission for Africa 2005a, b). For agricultural development, a particularly important development is the formation and progressive development of independent farmers' organizations, and micro-finance institutions (World Bank, 1991). They are increasingly replacing or complementing cooperatives which were often created by the state, and did not really lead to empowerment. The growth and development of communities, NGOs, and social capital is not only important for the implementation of development programs, diversity and strength of these organizations at the local and national level is also critical as a defense against elite capture of programs and project benefits.

### ***Pillar 3: Local government***

During the late 1980s democratization in Latin America, and later in other parts of the World, led to a political movement for the restoration or strengthening of local governments. Nevertheless, most World Bank and IMF economists could only talk about the fiscal dangers of decentralization, rarely making a distinction between provincial/state and local governments (Tanzi, 1991). They ignored the fact that it was usually provincial and state governments, as well

as major cities, not the local governments, which were building costly institutions, over-spending and over-borrowing, and draining the coffers of central governments. Indeed, in countries as far apart as Mexico and India, states or provinces were themselves highly centralized, and a major factor in disempowering local rural populations. Fortunately by the mid 1990s, the negative views on decentralization had given way to a more balanced assessment, recognizing both successes and failures in decentralization (Faguet, 1997, Piriou-Sall, 1997, World Bank, 1995). Equal emphasis on political, administrative and fiscal decentralization is needed. Unsuccessful decentralization programs are almost always characterized by inadequate allocation of fiscal resources to the local level decentralization (Manor and Crook, 1998, Manor 1999, Shah 1994). Successful decentralization is often pursued by strong leaders in relatively strong states, and puts a lot of emphasis on accountability at all levels, (Manor 1997).

Local governments can become an instrument for elite capture and corruption. To prevent that, they must be democratic institutions, but that in itself is not enough. Without strong communities and civil society, and a strong local private sector, local governments will not be subject to the scrutiny and the bargaining processes which are needed to make local development inclusive and efficient. A bargaining equilibrium along the lines of the Becker theorem is needed as much at the local as at the national level to lead to Pareto-efficient development programs (Becker, 1983, 1985)<sup>4</sup>

In the early 1990s the World Bank first discovered the power of local governments, or local development councils associated with them, in its Community-Driven Development Programs in Mexico (World Bank, 1991b), and later in North East Brazil. The innovation spread from there

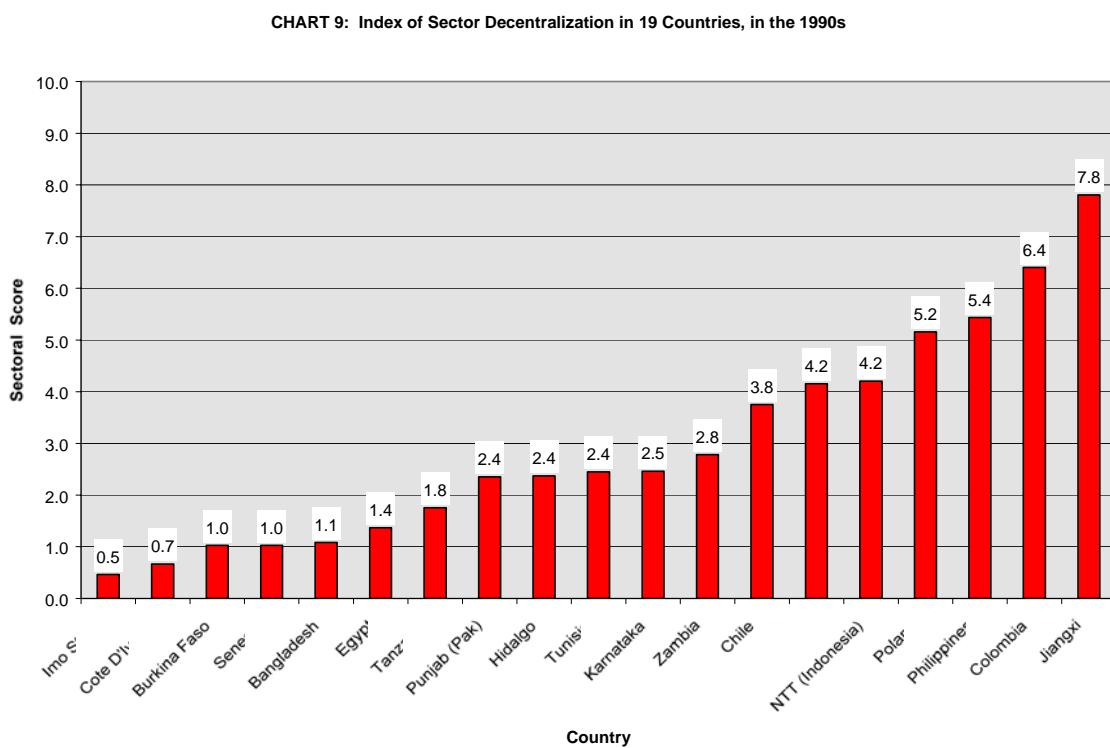
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<sup>4</sup> The Becker Theorem states that bargaining will lead to decisions and outcomes that will benefit all stakeholders or pressure groups (Pareto/welfare-improving choices) if the following conditions hold. 1. All pressure groups have correct and equal information about the consequences of each option for each stakeholder group. 2. All pressure groups have equal lobbying power or technology. 3. All decision and associated expenditures have to be evaluated against a single aggregate budget constraint. 4. Redistribution is costly. 4. The usual convexity properties that ensure a unique maximum sum for the model.

The logic of this theorem is simple. If all groups have full information and equal bargaining power, no group can secure unanimity on proposals that benefit it alone. So the bargaining process will drive participants towards proposals that benefit most stakeholders the most. The common budget constraint connects the decisions to each other and ensures that decisions improve welfare for all groups. Of course the Becker Theorem portrays an ideal which human institutions can at best approximate, but institutional design and development must seek such increasing approximation.

to Indonesia and East Asia, then to Africa and the rest of the world. Social funds started to build the capacity of local governments, and entrust them with coordination and some implementation functions, and eventually the distinction between community driven development and social funds disappeared. A research program on Decentralization, Fiscal Systems and Rural Development in the mid 1990s strengthened our understanding of this nexus of issues (McLean et al., 1998, Piriou-Sall, 1998). It analyzed the level of decentralization of rural service delivery in 19 countries (or provinces thereof) across the World (Figure 1). Four African countries had the lowest decentralization scores, while Jianxi province in China had the highest one. Latin American countries scored in the upper half, while Karnataka state of India ranked ninth and Punjab, Pakistan 13<sup>th</sup>.

Figure2: Levels of Decentralized Rural Service Delivery in 19 developing countries.



The recent Governance Report of the Economic Commission for Africa (2005a), shows that not much progress has been made on decentralization in Africa in the decade and a half since the above assessment: Decentralization, along with corruption, still receives one of the lowest scores of a whole series of governance indicators studied in 28 countries of Africa.

There are powerful reasons for using the lowest level of local government for coordination and execution of rural development and social safety net activities. It is at the local level that transparency is relatively easy to achieve, since people know their areas and can often verify the result of expenditures, or lack thereof, with their own eyes. Coordination of the many sectors involved in rural development at central levels is almost impossible given the heterogeneity of rural space. On the other hand it is feasible at the local level, where actors have direct knowledge of the local conditions and the capabilities of their partners. Empowered and properly resourced local governments can mobilize latent capacities in communities and at the local level more easily than centralized systems. And finally, local governments does exist in remote and disadvantaged areas where neither NGOs nor the private sector find it attractive to operate.

In most OECD countries and in the high performing China, local governments perform functions in education, health, social protection, environment, agriculture, land, local and community infrastructure, and promotion of private sector development. They are a multi-sector tool, better able than any other institution to coordinate local development and the different actors in communities, civil society, the private sector, and the sectors. Of course even their coordination capacity is always imperfect and in need of constant re-evaluation and development up.

#### ***Pillar 4: Sector institutions***

In 1980, sector institutions were the main focus donor financed programs programs, even though they proved again and again that they did were unable to effectively implement programs in widely dispersed rural areas, but rather gobbled up a large proportion of project resources just for functioning. There has been a growing realization that the sector institutions should delegate implementation to the private sector, communities, civil society organization, and local governments, using the principle of subsidiarity.<sup>5</sup> The previously discussed pillars of the institutional environment will not reach their full potential without a fundamental change in the sector institutions. In most cases they should change from providers of services and

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<sup>5</sup> The principle of subsidiarity states that functions should be allocated to the lowest level capable of effectively performing them while at the same time minimizing adverse spillover effects to neighboring units at the same or higher levels.

implementers of investment programs and projects to institutions in charge of policy formulation, standard setting, quality enhancement and quality control, and monitoring and evaluation. They also need to contract or otherwise assist in the financing of services and investments executed by others (World Bank, 2004). However some caution is needed here: The sector institutions have often been corrupt or gobbled up resources in other ways. In many cases the financing should therefore go via the intergovernmental fiscal system directly to local governments and communities, rather than via the sector institutions.

Rural development involves almost all sector ministries, from the police, local government, education and health to land, environment, agriculture and more. Among these sector institutions, the ones specifically associated with agriculture and natural resources have often been a particularly sorry and corrupt lot. Agricultural credit institutions and insurance systems not only achieved little for small and poor farmers, they also developed into major fiscal black holes, benefiting primarily the wealthy. Ministries of lands have lacked an effective constituency to ensure proper budgets for them, are often highly centralized, and corrupt. Ministries of agriculture are notoriously weak and politicized. We have been, and still are, struggling mightily to remove direct control over research and extension, or the parastatals from them. In addition they are notoriously poor at collecting the necessary data, monitoring sector developments, analyzing sector policy issues, and designing and implementing appropriate agricultural policy regimes and programs. Worst of all, they are often captured by large farmer elites and function more like pressure groups to extract subsidies and other favors for them. Nevertheless lot of effort has been spent on reforming them, with relatively little to show for. One reason for the lack of success is that this has usually been done this on a project by project basis, rather than in programs to transform the sector institutions in a broad movement of governance and public sector reform. Only once a cross sector approach is taken do I see a chance for more success.

### ***Pillar 5: The Central government and other central institutions***

Today the functions of central governments considered important for development are significantly different from the roles they saw for themselves in the 1960s and 1970s, and which they were assigned by donors in the development programs of that time. The central government has the ultimate design, oversight and coordination role of national development programs,

including those for rural development. But central government is less and less in a direct service delivery and executing role, except in regards to defense, taxation, expenditure management, the management of the intergovernmental fiscal system, and the electoral processes.

The Central Government has a particularly important role to play in bringing about the changes needed for this type of co-production among the four institutional pillars discussed above. It has to drive forward the process of decentralization of functions, resources and accountability mechanisms to local governments and to the end users, and to ensure that the sector institutions devolve service delivery functions to the other three actors, and transform themselves. It has to ensure that the business climate for the private sector improves, and that communities and civil society are free to develop and take on the development functions which correspond to them.

Other specific central institutions, such as the judiciary, parliament, the press, and national civil society organizations are today recognized to have important functions for rural development as well, such as contract enforcement, resource allocation to national programs including agriculture and rural development, and provision of information. In addition they should be the guardians of good governance. In order to foster rural development, they should press for further devolution of power and resources to local levels, and communities, and/or the delegation of many functions to them and to the private sector.

The agricultural and rural development profession still underestimate the importance of the institutional environment in general, and the importance of the local government pillar in particular. No comprehensive reviews of the state of the institutional environment for rural and agricultural development have yet been produced. The tools to do so already exist, including a toolkit for the review of the institutional environment for community and local development, for reviewing the business environment, and the social environment (World Bank 2003, 2004a,b, 2005e).

## Agricultural Profits and Rural Investment

Once a well performing institutional framework is in place, the pillars of rural development can function as semi-autonomous actors, and take on the great variety agricultural growth and rural development challenges, on their own and in collaboration with each others and with the central government. Except for rural areas with limited agricultural or natural resource potential, agricultural and rural development can then be viewed as primarily a multi-faceted investment issue. Few of the needed investments will occur if agriculture is not profitable. This is obvious for the on farm investments, but also applies to investments decided, financed, and executed by the other pillars. None of the other institutional pillars are in a position to invest and perform well unless agriculture and agro-industry are profitable. Unless they can save and have an investible surplus, communities will not have the means to finance or co-finance their investments members. Independent civil society organizations (rather than creations from the outside) must finance a significant share of their costs from local sources, and these again depend on directly or indirectly on profits from agriculture and other natural resource sectors Local governments which do not mobilize part of their resources from the local population tend not to be accountable to it (Manor, 2000), and therefore will not be the pillar of rural development they should be. Instead they will be highly vulnerable to elite capture. The local tax base in turn depends on agricultural and natural resource profits.

It is often assumed that rural non-farm activities can be used as a source of profits and an engine of growth for rural development. But most rural non-farm activities depend directly or indirectly on agriculture and other natural resource sectors (Hazell and Hagbladde, 1993, World Bank, 1983). Most of them produce goods and services which must be produced locally (rural home goods) that are linked to agriculture via forward, backward, and consumer demand linkages. Some industrial activities producing for the economy at large sometimes locate in rural areas because of low wages (Foster and Rosenzweig, 2003). Most examples of rural industrialization come from very high population density areas with good infrastructure. For other areas, the advantage of lower rural wages is frequently offset by other disadvantages of a rural location. Therefore the potential for rural industrialization is usually over-estimated. Agricultural growth, therefore, remains the single most important driver of the rural non-farm sector.

In areas with limited agricultural potential, investment opportunities will be limited even if the institutional environment is properly developed and agriculture in general is profitable. While these favorable conditions will enable the limited potential to be fully developed, that is not enough to provide for income growth of the populations in these areas. A development approach to these areas has to empower the local populations with the authority and sufficient fiscal resources to provide the necessary human development and social services, so that the new generations have the human capital needed if they choose to migrate, and those who choose to stay behind can combine remittances and social assistance with locally earned income for a decent living standard. As Foster and Rosenzweig (2003) have shown, such areas may also be able to attract some industrialization based on their lower labor costs.<sup>6</sup>

Agricultural profitability can vary along many different margins. The margins which arise between the world market and the farm gate are discussed first, followed by those which operate at the farm level.

## ***Margins of Profitability: From The World Market to the Farm Gate***

### **1. Distorted World Prices**

A growing body of evidence has accumulated since the 1980s that OECD agricultural policies have a significant depressive effect on World Prices. Poor developing countries tend to be net gainers from these depressed world prices because their poor agricultural performance has made them into net importers of food. (Anderson and Tyers, 1990,). But their agriculture cannot grow without increased agricultural profits. Eliminating the restrictive OECD policies has therefore become a central issue for them. The Uruguay round had made some progress in bringing agriculture into the normal international trade regime. But most countries imposed such high tariff bindings, that the impact of the Uruguay Round on reducing OECD protection has been

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<sup>6</sup> Foster and Rosenzweig showed that in India, rural industries have located preferably in areas which benefited relatively little from the green revolution and the subsequent agricultural development and where rural wages were generally lower. Rural industrialization has therefore reduced rural poverty and inequality among and within rural areas. Rapid growth of rural industries in the 1990s followed an increase in the overall growth rate of the economy, which was itself partly a consequence of improved agricultural development, and may have been aided by restrictive labor laws whose impact and enforcement may be less in rural areas than urban areas. It is not clear how much these lessons apply to the underperforming countries which are suffering from low overall and low agricultural growth.

minimal. (World Bank, 2005a, Ingco and Nash, 2004). Unfortunately by the summer of 2006 there is little hope that the ongoing WTO negotiations will achieve much progress either.

The major beneficiaries of reduced OECD protection would be the high agricultural performers in Asia and Latin America, as well as Canada and Australia. However, in the longer run, as the low performers address the roots of their underperformance, they too would benefit greatly from freer agricultural markets.

## **2. Overvalued exchange rates and Export taxes**

In the 1970s and 80s, OECD subsidies were not the most important depressor of Agricultural profitability in low income countries. Krueger, Valdez, and Schiff (1991) demonstrated that indirect taxation via exchange rate overvaluation and industrial protection was significantly more important than direct agricultural export taxes. Overvalued exchange rates not only depress export prices but also import prices of food such as rice, which have displaced traditional staple crops in urban markets, thereby depriving local farmers of their natural markets.

The increasing recognition of the importance of macro-economic stability and relatively low import taxation, reinforced by adjustment lending, has significantly reduced the indirect effects, while the direct export taxes have largely disappeared (Binswanger and Townsend, 2000). Of course there are still a number of countries in which import protection of manufacturing imposes an indirect tax on agricultural exports. Nigeria is only just now starting to systematically implement policies to combat Dutch disease and other sources of over-valuation, South African agriculture is suffering from the high value of the Rand, and Zimbabwe continues to over-value its currency. After some progress in reducing export taxation in the Ivory Coast, the sharks have had a field day since the eruption of the conflict, and many direct taxation measures and monopoly systems have re-emerged to reduce farm gate prices for Cocoa and other export crops to a small fraction of the border price. Nevertheless, progress in developing countries macro-economic, trade and agricultural policies has been far more important than on OECD subsidies.

### **3. Phytosanitary rules and regulation**

These are steadily emerging as more important barriers for developing country agricultural and agro-industrial exports. (The latter are also a victim of tariff escalation). Their increasing stringency is driven by consumer demand factors, as well as by their potential to replace tariff barriers as a protection against imports (World Bank, 2005a). Developing countries have little choice but to insert themselves into the standard-setting processes and bodies, and to build up their capacity to comply with these regulations (Ingco and Nash, 2004). Small countries are at a particular disadvantage, as they will have difficulties providing the necessary services. Regional collaboration and integration will be necessary to enable compliance at an affordable cost.

### **4. Barriers to intra-regional trade**

The other margin of profitability of agriculture is increase in intra-regional trade in agricultural and agro-industrial commodities. Domestic demand for most agricultural commodities is price and income inelastic, rapid gains in production will inevitably lead to lower prices and quickly reduce gains in farm profits. Moreover high production volatility translates into high price variability and risk for the farmers. Opening trade opportunities within sub-regions can greatly reduce the negative impacts of these factors on producers, and increase regional food security. Despite these well known facts, progress in the area of regional integration in agriculture has been depressingly slow. In Latin America and South and South-East Asia, attempts at Regional integration have had little impact on intra-regional agricultural trade. A recent survey by the Economic Commission for Africa shows that “there have been some strides in trade, communications, macroeconomic policy and transport. Some regional economic communities have made significant strides in trade liberalization and facilitation,...in free movement of people,...in infrastructure,...and in peace and security... Overall, however, there are substantial gaps between the goals and achievements of most regional economic communities, particularly in greater internal trade, macroeconomic convergence, production and physical connectivity.”(Economic Commission for Africa, 2004, p.1).

## 5. Transport and handling costs

High transport and handling costs have as detrimental an impact on producer incomes as low output and high input prices. They are putting many of the poor performers at a substantial disadvantage. High transport and handling costs not only affect export commodities, but also the imports of fertilizers, as well as the opportunities and costs of rural non-farm enterprises. Along with other factors discussed below, this is part of the explanation why many African farmers have to pay up to three times the price for fertilizer than farmers in Thailand, India or Brazil.

Sub-Saharan Africa contains a large share of the World's landlocked countries and is poorly endowed with transport infrastructure. At 6.48 kilometers of roads per 100 square kilometers, road density is well below that in Latin America or Asia (12 km and 18 km per 100 square kilometers respectively). Transport costs are among the highest in the World, and for landlocked countries can reach as high as 77 percent of the value of exports (Economic Commission for Africa, 2004). But it is not just the state of infrastructure which counts, but also the policies, institutions and organizations in the transport sector. Before the 1980s most transport businesses in Africa were publicly owned and managed, and heavily regulated, including railways, bus and trucking companies, airports, seaports, and civil aviation. These organizations suffered heavy losses, partly because of low tariffs, and this reduced the viability of transport service operations and imposed heavy costs on both users and the national economies. Since the 1990s the transport business has mostly been deregulated, and transport policies now allow for market-determined decisions, enterprise autonomy, and private participation in the ownership and management of transport business. Most bus and trucking companies have been privatized, and governments generally agree on concessioning the railways, ports and harbors, and airports, and in some cases have already initiated the process. Remaining public enterprises have been given considerable autonomy, and arbitrary regulation has been replaced by regulation through consensual performance contracts. In the highway sector, setting up of more sustainable institutions — autonomous road agencies and dedicated road funds — has become the norm, and in some countries has started to show positive results (World Bank, Africa Transport Unit website).

A serious problem in Africa is the extractions and bribes imposed by the police and others at border posts and road blocks. "Along the West African coast corridors linking the ports of

Abidjan, Accra, Cotonou Dakar and Lomé to Burkina Faso, Mali, and Niger, truckers paid \$322 million in undue costs at police customs and gendarmerie checkpoints in 1997, partly because the Inter-State Road Transport Convention had not been implemented.” (Economic Commission for Africa 2004). Since these extractions respond to the profitability of the commodities transported, there is therefore a real danger that if other margins of profitability improve, these extractions will go up and prevent the transmission of improvements to the farm. Well organized producer organizations, combined with more analytical work, will be needed to ensure governments will eventually crack down on these practices.

## **6. Financial services and interest rates**

Many poorly performing countries suffer from macro-economic instability and as a result have high real interests. Agriculture is rarely so profitable that it can compete with urban investments in such environments. In addition, rural areas in general and small farmers in particular face enormous disadvantages in financial markets. Clients are usually small and widely dispersed, increasing transactions cost. And seasonality and covariant risk make financial intermediation difficult (Binswanger and Rosenzweig, 1986, Binswanger and McIntire, 1987). Specialized agricultural financial institutions have been a failure all over the World (World Bank, 1993b, 1996b) Cooperative institutions have been a success for larger farmers in some middle income countries such as Brazil. The micro-finance movement can make a modest contribution, but it has found it difficult to overcome the rural disadvantages and emerge as an important agricultural lender (Gine, 2004). Successful approaches to improving rural financial intermediation have been focused on savings mobilization, postal systems, and improving access to finance by the rural non-farm sector, input suppliers and marketing systems, including contract farming (Yaron et al. 1998).

A successful intervention has been the policy of the government of India to force commercial Banks to open rural branches and reserve a proportion of their lending to agriculture and agro-industry. Two separate studies have shown significant impact on agricultural growth and the rural wage (Binswanger and Khandker, 1996)

To conclude this subsection, the six off-farm margins which influence agricultural profitability are well known, and some of them have been the subject of studies for a number of years. It seems, however, that they are rarely studied together, and it is therefore often difficult to decide where the more important margins lie which should be the focus of intensive policy dialogue. Commodity chain studies which involve colleagues from other sectors would be a way to integrate the knowledge of all these margins in a more systematic way.

## ***Farm Level Efficiency and Profitability***

### **7. Irrigation and drainage**

The literature on the green revolution has shown how important water control was to enable farmers to benefit from the new technology and make high levels of input use profitable. In India the new varieties and higher input use spread first to those areas with the best water control in the Northwest and South, and moved East and to the Center later, partly as a consequence of investment by farmers in irrigation and drainage, and partly because research also started to make high yielding varieties available for dryland crops. Sub-Saharan Africa and other poorly performing countries are lagging badly in irrigation and drainage: Less than 7 percent of crop area in Africa is irrigated, compared to 33 percent in Asia (Gelb et al. 2000). Large scale irrigation has suffered from unaffordable costs and centralized bureaucratic institutions. While models for changing these institutions into autonomous entities partially or fully controlled by the farmers have been successful in some countries such as Mexico, and even the Office du Niger, this approach has not yet been replicated in many countries and systems, and therefore even rehabilitation is often not yet a viable option. Small scale irrigation is generally agreed to be a more promising option, but investments are constrained by low profitability of agriculture and therefore low investment capacities of the farmers.

### **8. Land rights**

Farmers will rarely invest much in fixed assets unless they have secure land rights. While traditional tenure systems have often provided secure inheritable usufruct rights, in many parts of Africa they have come under pressure from rising population density and increased market

access (World Bank 2004, Economic Commission for Africa, 2005c). They also often failed to provide secure tenure rights to women, and to manage the potential conflicts which arise when immigrants need to be accommodated and enclosure of pasture threatens the livelihood of herders. Assisting these systems to evolve is therefore an important priority.

Excessive inequality of land ownership tends to reduce access to land and efficiency of its use (Binswanger, Deininger and Feder, 1995). Large scale farms from Brazil to the Philippines and Zimbabwe and Namibia have under-utilized their land, and have depended on subsidies to reduce their dependence on hired labor via mechanization. Small farms on the other hand have inadequate access to capital to make their operations more efficient and improve their profits. As a consequence, both farm sectors suffer an efficiency loss. The World Bank has now become a major player in land reform programs in the countries that still have an important land reform agenda (Binswanger and Deininger, 1995).

## **9. Soil erosion**

On an easily accessible website the Consultative Group for International Agricultural Research summarizes the literature on what is known about this topic (CGIAR 2005). Neither higher population nor poverty necessarily lead to land degradation. In the transition from long fallow systems to permanent agriculture soil fertility declines and farmers eventually have to introduce new techniques to stem and reverse this decline. This they tend to do during the evolution of the farming system to higher land use intensity, as discussed so well by Ester Boserup (1965) and Hans Rutherford (1973). Their theories are consistent with an increasing number of studies which have shown that the normal processes of land improvement associated with agricultural intensification are taking place in many countries (Pingali, Bigot and Binswanger, 1987, Tiffen, Mortimore and Gichuki, 1994). The literature also contains significant cases of soil degradation. These are often associated with open access regimes, insecurity of tenure, and other policy failure, which imply that the normal investment responses of individuals are impeded, and the necessary soil investments are not made. (Heath and Binswanger, 1996).

Nevertheless, the alarmist view that in many parts of the developing World land is being rapidly and irreversibly degrading is exaggerated. When I started in the World Bank, a sector report

estimated that land losses in Burkina Faso amounted to something like 2 percent of GDP per year. Today it is clear that this scenario has not materialized, as documented by Kabore and Reij (2004), and as clearly visible to the naked eye: When I returned to Burkina Faso this past year, the land supported nearly twice the population than during my first visit in 1982, crops looked greener and healthier than I had ever seen them before, crop livestock integration had happened in many parts, degraded arid lands were being recuperated via traditional and new techniques, and a number of new crop varieties had been introduced, there were more trees on the land. Of course this does not mean that desertification and soil erosion are not a problem worthy of attention, only that we can be more optimistic than the usual rhetoric would want us to be.

## **10. Gender relations**

In many parts of the developing world women are a majority of the agricultural labor force, and in Sub-Saharan Africa, they are the majority of the farmers. Yet their rights over land are often poorly developed, and they face disadvantages in access to education and health care, markets and capital. These restrictions have a negative impact on the efficiency of both men and women, and of agriculture as a whole. (Economic Commission for Africa, 2005c). Over the last decades, OECD countries have become a major advocates for women's rights in the developing world, but entrenched social attitudes constrain the progress which has been achieved.

## **11. Human capital**

A large literature confirms the importance of human capital for the efficiency of agriculture (Schultz, 1988). Rural areas suffer disadvantages in access to education, and health care. They also often have the poorest nutritional indicators. The paradox is that nutrition is often worst where food is grown! Access to food is determined by different factors than food production.

Nevertheless, even the lagging countries have made significant strides in improving access to education, although with important variations among them. UNESCO (2004) uses the concept of school life expectancy to measure changes in education in a consistent way across countries and over time. The measure is the total number of years a child can expect to stay in school at the primary, secondary and tertiary level. In the period from 1990 to 2001 the greatest increase in schooling participation took place in Africa and South America, where the median school life

expectancy increased by 1.5 years. Yet by 2001 the school life expectancy in Africa was 7.8 years while in Asia it was 9.9 years.

Many health and education systems remain very centralized, focus on direct service provision by the state, and fail to empower the users. (World Bank, 2004a). It is hard to see how these systems will ever serve rural people well without radical decentralization, and greater involvement of communities and other non-state actors.

Over the past two decades, HIV/AIDS has emerged as the single most important threat to human capital in Sub-Saharan Africa. Life expectancy in the hard hit countries has reverted to the levels prevalent at the time when I was born. Not only is human capital lost through the death of people in the prime of their lives, including agricultural extension staff, researchers, teachers, and medical personnel, the transmission of human capital from generation to generation because of higher dependency ratios and the huge number of orphans. As shown by Bell, Devarajan and Gersbach (2003), the dynamic losses for heavy hit countries can be catastrophic.

It is hard to see how agricultural and rural development will thrive in the hard hit countries of Africa unless the epidemic is stopped in its track. This can come about through more systematic prevention, and through free and universal access to HIV/AIDS treatment. In addition the impacts on the orphans must be mitigated by much better social protection programs. As an advocate both for stronger HIV/AIDS treatment, care and support programs as well as for decentralization and community-driven approaches I have argued elsewhere that all these programs will need to be highly decentralized and community driven, involve the private sector, and be coordinated at the local level (Binswanger et al, 2005).<sup>7</sup>

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<sup>7</sup> The large scale World Bank HIV-AIDS programs in Africa emerged late (Mallaby, 2004). They now apply Community-Driven Development to the field of HIV/AIDS, and have developed the most decentralized and empowering approaches to fight the epidemic with the best chances for a truly scaled up response.

## **12. Technology: The ultimate source of agricultural profits and rural growth**

Despite the enormous growth in human population and incomes, for more than 150 years agricultural commodity prices have followed a declining trend. This astonishing phenomenon has been caused by the combination of increasing international trade and sustained technical change in agriculture (Mundlak, 2001). Adaptation of the stock of scientific and technical knowledge to local conditions and implementation of new technology are most impressive in OECD countries, where the necessary investments have benefited from the huge distortions in favor of agriculture. Asia and parts of Latin America have also done well. In particular India and China have had some of the most impressive agricultural performances and therefore over a third of humanity has escaped the threat of famine during the past thirty to forty years.

In the low performing countries of Africa agricultural yields are half or less than half those in other Regions of the World and they have been stagnating for a long time (Gelb et al. 2000). While there have been some notable advances in agricultural technology in Africa over the past thirty years, investment in agricultural research, whether measured per unit of output or per cropped area, has been much lower there than in any other Region of the World (Pardey, Roseboom and Anderson, 1991). This problem was already an issue in the mid 1970s, when I was attending my first international conferences at Airlie House (Arndt, Dalrymple and Ruttan, 1977). Unfortunately over the past decade and a half, the International Community has had other priorities, and international support for agricultural technology, including from the World Bank has declined in real terms. I cannot see how African agriculture can prosper without bringing agricultural research spending to comparable levels as in the rest of the developing World.

The under-performing countries could of course also benefit the large stock of already available technologies. Some of these could be readily implemented while others will require further adaptation. By improving the institutional environment for agricultural and rural development, and eliminating those barriers to profitability which are under their control, they could implement much of the available technology via processes of private and public investments.

The literature on the distribution of benefits from technical change is crystal clear that eventually most, if not all benefits from technical change in agriculture elude the farmers and are transferred to consumers in the form of lower commodity prices, the famous agricultural treadmill. Evenson and Collin, (2003) show this for the Green Revolution from 1996 to 2000. It is therefore not sufficient to improve the institutional environment and eliminate the barriers to profitability in the low income countries so that they may adopt the already available technology. Unless they can produce a steady stream of new technology, the gain which they will be able to make will only be temporary. The gains will be quickly be eroded by declining agricultural prices. In a global agricultural system, agricultural profits will go to those who are ahead of the curve in terms of implemented technology, human capital and institutions. The under-performing countries will need to strengthen and re-build their agricultural research and technology adoption systems in the public sector, farmer's organizations and the private sector to be able to compete internationally and provide a stream of farm profits to the farmers in the long term.

## **Some conclusions**

### ***What are the key priorities for the low performers?***

As emphasized in the introduction, priority setting in any given country must depend on an analysis of the strengths and weaknesses of the country's policies, institutions and infrastructure, and on the opportunities of the country as determined by these, as well as its location and agroclimatic conditions. There are enormous variations in all of these factors and there are only few general recommendations that can be made, and even these are not magic bullets. The few which I dare to make are as follows:

I regard further improvements in the institutional environment as critical for empowering rural people for their own development. As far as Africa is concerned, the fact that its governments are still the most highly centralized and have made relatively little progress especially in administrative and fiscal decentralization, would suggest that these areas deserve priority attention almost in all countries. It is also clear that the business environment in most of Africa still needs a lot of improvement. In particular corruption ranks with decentralization as the

lowest among more than a dozen governance indicators studied in the recent survey of 29 countries by the Economic Commission for Africa (2005).

Even though the Copenhagen Consensus (Lomberg 2004) did not focus specifically on agricultural and rural development of the lagging countries, I agree with three of their top priorities: Combating HIV/AIDS, further trade liberalization, in particular in agriculture, and the development of new agricultural technology, which they ranked respectively as their first, third, and the fifth priority.

### ***Most Margins of Profitability Are Beyond the Control of Farmers***

Of the 12 margins or profitability, farmers only have partial or full control over three of them: the adoption and implementation of available technology, soil erosion, and irrigation and drainage. They can develop the capacity to influence several of these margins by organizing as farmers organizations to manage some of the services they need themselves, compete with other service providers, as well as putting them under competitive pressures. These include marketing, quality control, processing, agricultural credit, agricultural extension, management of irrigation infrastructure. To influence all the other margins, they need to organize politically at the local, national, and now even the international level, so that they can influence local, national and international policy, institutional, and funding decisions.

### ***The growing need of multi-sectoral approaches***

Improvements in four of the five institutional pillars of rural development involve a holistic, multi-sectoral approach, and only the sector pillar involves specific institutions of agricultural and rural development. Progress on the institutional environment for rural development therefore depends on intensive collaboration across sectors in analytical work, policy dialogue and institutional reform programs. Progress in moving in this direction has been most pronounced in work focusing on the central government pillar, the private sector, and involvement of civil society in policy and program discussions. But much more is needed. Work on the investment climate still does not systematically involve agricultural economists. Local and community-driven development, and the associated decentralization and sector reforms cannot be pushed by

an individual sector and should be pursued as holistic agendas bringing together staff from all the relevant sectors.

Of the 12 “margins of profitability” only four fall squarely into the realm of agricultural and rural development specialists: Agricultural technology, soil erosion, irrigation and drainage, and phytosanitary restrictions. In all other areas progress depends on the work of, and/or collaboration with specialists in infrastructure, macro- and fiscal economics, human development, social development and social protection, gender, and more. While some progress has been made in moving towards multi-sectoral operations, many systems and incentives in the countries, donor organizations and the World Bank are tilted in favor of specific analytical work and operations in single sectors.

While research on the institutional environment and on the margins of profitability is often quite good, but scattered in many different reports, disseminated to specialized audiences, and poorly used for policy dialogue. In addition there are often serious gaps. For example I am not aware of any recent comparative studies for low income countries which decompose the difference between world prices and farm gate prices of outputs and inputs such as fertilizers into the many margins of profitability. Such work is essential for a coherent policy dialogue and for politically mobilizing farmers’ organizations to fight for their interests, and equip them with the knowledge to do so effectively. What is needed here are a series of value chain studies for different commodities. These must not just be done for low performing countries, but also for high performing exporters such as Brazil and Thailand, in order to have standards against which the low performers can be compared.

## **Outlook**

Our understanding of what it takes to develop agriculture and rural areas has steadily improved since I first became interested in these topics about 40 years ago. And progress has been huge for rural populations in most of Asia. In Latin America progress has been significant in terms of agricultural growth, but rural poverty has declined little. But sub-Saharan Africa and a number of other low performing countries have made little progress and rural poverty has increased. There is a lot of pessimism around the world these days, and I will not dwell on the reasons for that.

Instead I want to conclude by focusing on some positive trends, and changes in some underlying factors which may be more reasons for hope.

### ***The success of the high performers***

When I first became interested in agricultural development about 40 years ago, the profession was deeply pessimistic about China, South Asia, and South East Asia. It seemed impossible at that time that these Regions would become food self sufficient, and major exporters in a number of products. But it has happened, thanks to the Green Revolution, improving rural development policies and institutions. More recently the strong urban growth performance of many of these economies has fueled the demand for their agricultural sectors, and increasingly provides remunerative employment, and therefore also drives up rural wages. Sub-Saharan Africa has not yet been able to break out of its vicious cycle of poor governance, poor investment climate, centralized states, under-funding of agriculture, technological backwardness and aid dependence. But the continent is enormous, and does have a huge agricultural potential. It would be wrong to assume that it cannot or will not develop as other of the “hopeless cases” have. Of course conditions are different, but finding locally adapted solutions is a challenge, not an impossibility.

### ***The rise of democracy***

Over the past 20 years many of the former military regimes and other authoritarian states have moved towards democracy, greater space for communities, civil society organizations, and farmers' organizations. Unfortunately the gains are not irreversible, and in many countries the depth of change leaves a lot to be desired (Economic Commission for Africa, 2005). Nevertheless I am hopeful that what we have seen is only a beginning. Working systematically on the institutional underpinnings of rural development will assist these forward movements.

### ***Agricultural policy reform in the low income countries***

Compared to agricultural policy changes in OECD countries, macro-economic, trade, and agricultural policy reforms in the Africa and other poorly performing countries over the past 20 years has been very significant, as discussed previously in the paper. Again it is just a beginning, and the World Bank needs to keep up its pressure for more progress, especially on the

investment climate and the many margins of agricultural profitability which are still to be tackled systematically.

### ***International agricultural trade***

At the Regional level in Africa NEPAD and the African Union are fostering Regional integration, and the World Bank and other donors are supporting these efforts. The issue of agricultural subsidies of OECD countries has become the major issue of the current WTO negotiations. The current stalling of progress is hopefully only a temporary phenomenon. In any case the example of the area of textiles has shown that it we should expect that dismantling of the adverse agricultural policies may take 20 to 30 years.

### ***Political determinants***

As Klaus Deininger and I showed in the paper on “Determinants of Agricultural and Agrarian Policies in the Developing World,” poor performance and exploitation of rural populations have their roots in material conditions of rural areas -- special dispersion, seasonality and covariant risk -- which make it difficult for the rural poor to organize politically and prevent elite domination and the associated adverse institutions and policies. These material conditions of have not changed since we wrote this paper. But nevertheless many poorly performing countries have become more democratic, given more space to civil society, and invested at least modestly in education. In addition, the rise of the internet and the spread of cell phones means that these populations can no longer be kept in the dark, and social mobilization and political organization has become easier for widely dispersed populations. Farmers’ organizations and organizations of landless workers have become stronger, and started to make a real difference in some countries, such as Brazil, which has finally started to tackle its enormous land reform problem. Farmers’ organizations are also becoming an important interlocutor in the process of policy formulation in a number of African countries. At the same time donor organizations, including the World Bank, are fostering greater participation in policy formulation and program implementation via PRSPs, Anti-corruption programs, Social and Gender Assessments, programs to assist civil society organizations, support to universal primary education programs, and last but not least, Community-Driven Development.

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