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## Making Agriculture Work for the Poor

Martin Prowse and Admos Chimhowu

**T**his paper summarises recent work on poverty, agriculture and land.<sup>1</sup> First, we report on panel data analysis in five countries – Vietnam, Uganda, India, Nicaragua and Ethiopia.<sup>2</sup> We focus on rural exits from poverty, their relation with agricultural growth trends, and the contingent factors that supported these exits. We suggest that three ‘pillars’ can make agriculture work for the rural poor – infrastructure, education and information. Second, we summarise recent CPRC work on land tenure, focusing on the relationship between tenure and agricultural productivity.

### Policy conclusions

- Agricultural growth is necessary for poverty reduction in most contexts, but not sufficient – for instance, there are cases of high growth but few exits from poverty;
- Agricultural growth is particularly unlikely to be sufficient in the absence of good infrastructure, sufficient education and effective information services;
- In some contexts, contingent factors such as transport and communications infrastructure, markets and improved access to resources are crucial; and
- Improved access to land is also vital, both in its own right and as a means to improved agriculture, though not necessarily via individual title. Communal title and land rental markets also have significant growth and equity potential.

### Introduction

Despite the growing importance of non-farm rural economic activities and acknowledged increase in global urbanisation, agriculture will continue to play a vital role in reducing poverty in most developing countries for the foreseeable future. As Chen and Ravallion (2007) estimate, the incidence of rural poverty (\$1-a-day) in developing countries only decreased by 0.4% per year between 1993 and 2002 when China is excluded. And apart from Latin America and the Caribbean, in 2002 the rural share of the poor was greater than 70% in all regions of the developing world.

The majority of the poor, and especially those living in chronic poverty (those who endure poverty for an extended duration, and are often deprived across many dimensions), still make most of their living from agriculture and land. Clearly, making agriculture work for the poor must be a central component of policy approaches to reduce poverty.

Our main focus here is on the factors that enable escapes from rural poverty. Before turning to this, we briefly the key features of chronic poverty, and the shocks and stresses that contribute to poverty entries. The five country studies which inform the first part of this Natural Resource Perspective have re-confirmed the key features of chronic poverty summarised in the First Chronic Poverty Report: that the chronic poor are mainly located in rural areas, frequently working in agriculture;

often have a large household size with a high proportion of children; and have low levels of education. Moreover, the studies confirmed that the incidence of chronic poverty was greatest in remote rural areas with little infrastructure, and amongst disadvantaged social groups.

The panel data summarised here – which follow the same households through time – show that the contribution of shocks and stresses to poverty entries varied across countries: in Ethiopia, rainfall variation and illness were the most important shocks; in Uganda, increasing household size was an important factor in entry, as was age of household head; whilst in India, health shocks were associated with poverty entries and large household size with severe poverty. Policy responses to mitigating these shocks and stresses are well developed, with social protection and health provision insulating households against some of these risks. In contrast, policies to promote poverty exits seem currently to have less policy traction – hence our focus on upward mobility.

### Poverty exits and agriculture

The five country studies examined the relationships between growth, markets and poverty dynamics. Despite some unevenness in the data, the panels allowed for the construction of transition matrices that show which households are chronically poor, non poor, and which enter and



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exit poverty. Table 1 summarises the rural poverty transitions for the five countries, and the exit-to-entry ratio – a figure that summarises the movements into and out of poverty. Comparisons across the five countries need to be made with some caution as the panels cover different time periods, and are not strictly nationally representative. Nonetheless, broad comparisons indicate that Vietnam (17.7%) and Uganda (19.2%) panels have the lowest chronic poverty figures, and the highest exit-to-entry ratios. The Nicaragua panel shows the reverse. The chronic poverty figures for India (both periods) and Ethiopia are similar at around 24-25%, with Ethiopia having a higher exit-to-entry figure.

### Summary of studies

Table 2 shows that in all five countries agriculture plays a vital role in poverty exits. However, a comparison between poverty dynamics and national agricultural growth rates suggests that agricultural growth in itself is not sufficient to reduce chronic poverty. The country with the highest agricultural growth rate was Nicaragua (5.1%), which also had the highest level of chronic poverty and lowest exit-to-entry ratio. The inequitable distribution of land in Nicaragua appears to limit the extent to which agricultural growth contributes to poverty exits. Moreover, those countries with the greatest reduction in chronic poverty, and greatest exit-to-entry ratio – Vietnam and Uganda – enjoyed good agricultural growth rates of 3.8%, but not substantially above those of Ethiopia and India, who enjoyed less success in lifting households out of poverty. The stability of agricultural growth rates appears important, as, of course, does the development of multiple export sectors that engage the poor.

The contrasting fortunes of these countries could suggest that the more successful countries – Vietnam and Uganda – have benefited from free markets for many goods and services, in contrast to the more rigid systems in rural India, Ethiopia and Nicaragua. Such an interpretation should, however, be tempered by recognition of the role of the state and governance in promoting poverty exits. Both Ugandan and Vietnamese governments have identified with poverty reduction as a clear ‘political project’ (see Shinyekwa and Hickey, 2007; and Tuan, 2007, respectively), and Vietnam’s planning tradition and national targeting programme have been particularly effective in focusing attention and resources on the poor.

Overall, the evidence from these five studies suggests that agricultural growth – whether spurred on by higher producer prices, and/or land productivity increases – does not appear to be sufficient to ensure increased poverty exits in the absence of three ‘pillars’ that make agriculture work in the best interests of the poor (Box 1). These are discussed below.

### Economic Infrastructure and Poverty Exits

Infrastructure emerges as a key factor underpinning poverty exits in the country studies. In Vietnam, the rapid reduction in poverty (at

#### Box 1: Three pillars that facilitate poverty exits in rural areas

Agricultural growth alone is not sufficient to enable people to escape chronic poverty. In addition:

- Economic infrastructure is vital;
- Education is key both for agriculture-based poverty exits, and for diversification beyond agriculture; and
- Information provision through ‘traditional’ extension services and innovative delivery channels promotes poverty exits.

#### Land tenure and poverty reduction

Enhanced access to productive land can promote poverty reduction:

- Increasing the security of poor people’s tenure of land – in rental markets through tenancy reforms, or through simple formalisation of customary tenure – can under certain conditions increase productivity, and make land more accessible to the poorest than land titling and the privatisation of land.

In most countries, there is a need for the direct involvement of state institutions, in addition to non-state and private sector actors, to promote the interests of the poor are promoted in all of these areas.

least in lowland areas) came on the back of significant investments in irrigation and road infrastructure: for example, public investment in irrigation averaged over 60% of the agriculture sector’s budget in the late 1990s. Moreover, village infrastructure in India contributed substantially to poverty exits. In Ethiopia rural roads improved the terms on which the poor accessed markets for both agricultural and non-agricultural activities, as well as the price of daily goods. How far infrastructure and service provision help to reduce poverty depends heavily on country context. Devolved forms of consultation and decision-making within a strong regional planning policy are likely to make infrastructure investments more locally relevant.

### Education and Poverty Exits

The country studies show that education is important for rural poverty exits through three channels. First, education levels are linked to increased productivity within agriculture. Second, education is associated with successful diversification into non-farm activities – a very likely avenue for exiting poverty in some contexts, and one which can often increase investment in agricultural production. Third, the country studies also show that education contributes importantly to successful migration to urban areas. But much migration remains rural-rural (for example, in Uganda, Ethiopia and India), and education can play a role here too. Mosley (2004) found that educated rural casual labourers in Bolivia and Uganda were more likely to be able to

**Table 1: Rural poverty transitions – percentage of households in panel**

	No. of HHs in Rural Panel	Agricultural Growth Rate – mean percent (S.D.)	Chronic Poor	Entered Poverty	Exited Poverty	Never Poor	Exit-to- Entry Ratio
Rural Vietnam 2002-04	3,146	3.8 (0.4)	17.7	5.8	14.4	62.2	2.5
Rural Uganda 1992-00	1,117	3.8 (3.2)	19.2	13.5	31.8	35.5	2.4
Rural India 1970-81 <sup>a</sup>	3,139	2.6 (8.1)	25.3	36.2		38.5	n/a
Rural India 1981-98 <sup>a</sup>	3,996	3.4 (4.8)	24.3	38.6		37.1	n/a
Rural Nicaragua 1998-01	1,273	5.1 (5.3)	43	11	17	30	1.5
Rural Ethiopia 1994-04	1,187	2.6 (9.9)	24	13	27	35	2.1

Source: Produced using national-level poverty lines and data from the country studies – see references.

<sup>a</sup> The India data does not allow transient poverty to be divided into exits and entries. Moreover, the 1981–98 panel utilises a large number of split households, and duplicates the data from 1981 for all the ‘new’ households (see Bhide and Mehta, 2005).

bargain for better wages. The educational thresholds that supported poverty exits in the country studies varied within and across countries: for example, in the Vietnam hills lower levels of education were required than on the plains. Frequently education systems fail the chronic poor, particularly in terms of quality in remoter regions, accessibility and affordability – key points that education policies need to be cognisant of.

### Information and Poverty Exits

The third pillar is information provision. Typically the chronic poor have low-quality social capital with the consequence that access to important information for exiting poverty may be a major constraint: for example, information on job opportunities, on input and output markets, or on new farming techniques. This lack of information may be a major factor accounting for the persistence of poverty. Whilst agricultural extension has been the conventional channel for disseminating information, the country studies here provide mixed evidence about the effectiveness of extension services. In rural Vietnam, extension centres seem to have played an important role in helping some ethnic minorities escape from poverty, and in rural Ethiopia extension services contributed to reduced poverty levels.

A key question for future research concerns the respective roles of conventional extension services and a wider spectrum of private and public agencies. Recent assessments have focused almost exclusively on information technologies. It is time to look more widely at information sources and their impacts. For example, contract farming companies and traders may be much more powerful and accessible sources of economic information. Providing wider access to mobile phone services may also be an important dimension of this, in conjunction with investments in infrastructure and education.

We now turn to that thorniest of asset issues: namely, access to land.

### Access to Land and Poverty Exits

Access to productive land reduces poverty through numerous channels. In addition to giving households a sense of belonging and self worth, access to land can enable poor households to produce food, and participate in local and other commodity markets. The terms on which land is accessed will influence how and how far agriculture contributes to poverty reduction.

Secure access to land is seen as promoting better resource management decisions, minimising local conflict over land, and, most importantly, contributing to increased productivity. But is there a clear link between different types of land tenure and productivity growth? Here, thinking is polarised around two positions for which there is conflicting evidence. The first posits that the more secure a tenure regime is, the greater the likelihood of increased productivity.

Some forms of customary tenure are often seen as insecure thus affecting investment, land transactions and ultimately factor mobility and efficient resource allocation. Freehold title is therefore privileged over customary tenure in enhancing productivity as it is seen as the most secure and therefore encouraging the adoption of new technology. Deininger (2003) draws together evidence for this position. A common way in which freehold title is linked to increased productivity is through using land as collateral against loans. De Soto (2000), for example, argues that land held under customary tenure is 'dead capital' and tenure reform can therefore reduce poverty if it creates 'capital' out of land.

The second key position suggests that the link between tenure status and productivity (and therefore poverty reduction) is not clear cut, and is largely dependent on the factors considered and the way that particular tenure categories are defined (Jayne et al 2003). Some (e.g. Place and Hazel 1993) argue that a lack of credit, knowledge and labour affects productivity more than tenure.

**Table 2: How agriculture contributes to poverty exits**

	Chronic Poor	Exit-to-Entry Ratio	Main sources of exit from poverty	Caveats
<b>Rural Vietnam 2002-04</b>	17.7	2.5	Several fast growing sub-sectors e.g. coffee, livestock, poultry, and aquaculture. Strong exports. Relatively high agrochemical use.	Increased agricultural income (through both increased output and producer prices) did not benefit ethnic minorities to the same extent as mainstream society.
<b>Rural Uganda 1992-00</b>	19.2	2.4	Agriculture's contribution to total household income increased, on average, from 15% in 1992 to 50% in 2000. Key role of multiple agricultural exports - coffee, fish, cut flowers, and maize. Poverty exits mainly via higher producer prices.	Wage employment provided greatest agricultural prospect of escaping poverty in Uganda, highlighting the importance of labour market performance for the poor.
<b>Rural India 1981-98</b>	24.3	n/a	Exits through agriculture depended on a series of corollary factors, not solely on agricultural output: changes in assets such as improving access to land, livestock, enhanced village level infrastructure, including irrigation; and access to more dynamic markets close to urban areas.	The poor land owned/accessed by scheduled castes and tribes, together with continuing discrimination against them, limited their chances of agriculture-driven poverty exits.
<b>Rural Ethiopia 1994-04</b>	24	2.1	Road infrastructure was key for poverty exits, and extension services were also important.	Aggregate proportion of income coming from crops, wage income, and self employment stayed remarkably similar over the ten year period – clearly, there was no transformative growth away from agriculturally-based livelihoods.
<b>Rural Nicaragua 1998-01</b>	43	1.5	Highly-skewed distribution of land ownership means that own-farm strategies offer little to the chronic poor: farming provided an exit route only when associated with sufficiently large asset holdings or with skilled wage labouring.	Non-farm and or off-farm employment or self-employment appears to provide more hope than farm-based strategies, especially where skilled labour is involved.

Source: Same as Table 1





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### ***What role does customary tenure play in reducing poverty?***

Contemporary thinking on tenure reform is skewed towards land titling. However, the kernel of the land titling and privatisation argument is tenure security, which can, in some instances, be provided by forms of customary tenure. It has been argued that these can still accord protection against risks, especially of eviction, to the same extent as legal papers, but only in places where traditional institutions still work and have adapted to changing local practices (Toulmin et al, 2002). Where they have broken down, this perspective often argues for simple forms of tenure security without privatisation, and trials with 'collective' models.

Moreover, some have argued that customary tenure is often flexible and able to adapt to market conditions (Cotula et al, 2006). Land rental markets, such as through tenancy reforms, can offer the poor fast and affordable access to land, and bring tracts of under-utilised land into use (World Bank, 2003).

In summary, tenure reform to increase productivity (through increased tenure security) does not necessarily require land titling, especially where conventional institutions operate effectively. Whilst the provision of productive land to the poor may be necessary to reduce poverty in some cases, it is by no means sufficient, and may well need to be supplemented by contingent investments in the three 'pillars' for promoting poverty exits.

### **Conclusion**

To the authors, it is somewhat ironic that our conclusions regarding agriculture in the new Millennium do not differ that much from the policy responses of the 1970s, apart from our argument on enhanced access to productive land. What is certainly different, though, is the debate over 'who provides?'. How far land reform and the 'pillars' for rural poverty reduction are provided by conventional state channels, or by the wider nonstate and private sector actors, is now more open. The answer will depend on country context, institutional histories and sectoral and regional planning processes.

Certainly, in most developing countries there is still a need for the direct involvement of state institutions, working in concert with non-state actors and the private sector, to make sure that agriculture works for the poor.

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The five country studies were all produced as Background Papers for the Second Chronic Poverty Report, Chronic Poverty Research Centre, University of Manchester, UK ([www.chronicpoverty.org/resources/index.html](http://www.chronicpoverty.org/resources/index.html))

### **Endnotes**

- <sup>1</sup> Largely undertaken by the Chronic Poverty Research Centre – CPRC ([www.chronicpoverty.org](http://www.chronicpoverty.org))
- <sup>2</sup> The growth and poverty dynamics papers were funded by USAID and ADA (Austria) as Background Papers for the Chronic Poverty Report 2008/09

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