

# **Making agricultural markets work for the poor**

## **Working Paper for the Renewable Natural Resources and Agriculture Team, DFID Policy Division**

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## Executive summary

Agricultural growth, particularly through improved productivity, is one of the principal routes to reducing poverty in developing countries. Four 'transmission mechanisms' have been recognised, all of which depend on effective market coordination to ensure that the benefits of agricultural growth reach the poor. Making agricultural markets work for the benefit of the poor depends on:

- finding ways to stimulate and nurture the development of an exchange economy that promotes agricultural growth; and
- improving the extent and terms of access to and beneficial participation in markets for the poor.

In the past, state- and market-led approaches to coordination have not been wholly successful. Responding to the two challenges above therefore means taking a new approach to market coordination. However, there is little consensus on how this might be achieved. There are two main views:

1. The 'market failure' view suggests that liberalisation can dispense with policies that are costly and lead to corruption, and that stifle markets rather than helping them develop. According to this view, liberalisation has been either poorly or partially implemented and states continue to meddle in markets with detrimental effects. If markets are to function effectively, state intervention must be restricted to cases of market failure, mostly related to public goods. Policy prescriptions include a set of public good measures to address problems in financial markets. These include increasing investment in infrastructure, legal and market institutions and agricultural support organisations.
2. The 'embedded market' view suggests more far-reaching policy prescriptions. This view questions the underlying logic of liberalisation and makes a case for a more significant coordination role, either for the state or for other institutions, in market coordination. Abandoning essential state functions without replacing them with private sector activity is regarded as the main reason for low and stagnating agricultural productivity. States should not only provide roads, health care, education, property rights, information and anti-monopoly regulation, etc., but should address issues of risk insurance, social capital building, intermediation and coordination between market parties.

These economic analyses of the problems of market coordination make useful suggestions for what should be done to improve the efficiency of markets. However, even where markets work well in a technical sense, exclusion (economic, political and social) can prevent the benefits of agricultural growth reaching the poor.

Exclusion results in two main processes – segmented markets and interlocking markets. Segmented markets occur where there is any form of non-economic discrimination – including that based on gender, religion, ethnicity and caste. Interlocking occurs when immediate domestic needs lead poor households into necessary but unhealthy patron–client relationships in which they borrow from, work for and hire land from the same person. This kind of relationship tends to disadvantage poor 'clients', who have to accept their patron's terms and become less and less able to break out of the ensuing 'dependence trap'.

Because they cannot engage in labour markets on an equal basis, the poor are often unable to benefit equally from increases in rural incomes resulting from agricultural productivity gains and growth. They may also be excluded from opportunities in the wider non-farm economy, particularly where there is discrimination against caste and gender.

There is little evidence and experience to guide policy options for overcoming social exclusion. At the same time, encouraging anti-discrimination practices is difficult in countries where capacity is limited, and the powerful have a vested interest in maintaining the status quo. It is also important to avoid confusing the issue. Tackling discrimination and exclusion as a rights and justice issue is completely different to tackling exclusion because it causes market imperfections, thereby limiting the effects of agricultural growth on poverty reduction.

## **1. What is the issue and why is it important?**

Agricultural growth, particularly through improved productivity, is one of the principal routes to reducing poverty in developing countries. Poverty reduction has occurred most rapidly in areas where significant productivity gains in agriculture have occurred (e.g. East Asia). On the other hand, in sub-Saharan Africa, where agricultural productivity has increased by only one half between 1961 and 2001, poverty has increased in both proportion and number (FAOSTAT, 2004). More recently, productivity has stagnated or even declined throughout sub-Saharan Africa (Nkamleu, 2003).

There are four routes through which agricultural growth and productivity gains can provide 'transmission mechanisms' to aid poverty reduction:

1. The direct and relatively immediate impact of improved agricultural performance on rural incomes.
2. The impact of cheaper food for both the urban and rural poor.
3. Agriculture's contribution to growth and the generation of economic opportunity in the non-farm sector.
4. Agriculture's fundamental role in stimulating and sustaining economic transition, as countries (and poor people's livelihoods) shift away from being primarily agricultural towards a broader base of manufacturing and services.

Markets are vital if these transmission mechanisms are to bring about poverty reduction through agricultural growth. However, in the developing world (especially Africa), these mechanisms fail to realise the potential contribution of markets to poverty reduction. There are two reasons for this. Firstly, inefficient allocation of resources often leads to market failure and little growth is achieved, so only small dividends are distributed to the poor. Secondly, transmission mechanisms break down when people are socially excluded from markets.

This paper synthesises the evidence and identifies areas of debate concerning how improved market coordination in agriculture can affect economic growth and poverty reduction. We also ask what might be done to stimulate and sustain such growth. The

overarching issue to explore is how to 'make markets work for the poor'. This implies two key questions:

1. How can we stimulate and nurture the development of an exchange economy that promotes agricultural growth?
2. How can we improve access to and beneficial participation in markets for the poor?

## **2. The importance of agricultural markets for the poor**

### **2.1 Agricultural productivity – the key to poverty reduction**

Over the past 40 years, the incidence and extent of global poverty has reduced significantly, with particularly remarkable progress made during the past two decades. Between 1981 and 2001 the percentage of the world's population living on less than US\$ 1 a day – the internationally agreed definition of absolute poverty – fell from 40% to 21%.

The aggregate picture of success, however, masks a story of variable progress. While poverty has fallen most rapidly in Asia, especially in China and the industrialising countries of South East Asia, in sub-Saharan Africa the number of people living in absolute poverty has effectively doubled in just 20 years to reach almost 316 million people in 2001, about 47% of Africa's population. Furthermore, large numbers of people still live in poverty, even in the most 'successful' countries; for example, in India, there are 358 million people living in poverty (more than the total number of poor in Africa), most of them in rural areas.

Differences in rates of poverty reduction between regions and over time have been closely and consistently related to differences in agricultural performance – particularly to differences in the rate of growth of agricultural productivity. In simple terms, countries or regions where agricultural productivity has increased the most have achieved the greatest reductions in poverty.

A quick review of recent historical experiences confirms this finding. In parts of Asia, rapid productivity gains, achieved largely through the technological advances of the Green Revolution, provided a fast-track route out of poverty for millions. Between 1961 and 2001, developing country cereal production increased from 309 to 962 million tonnes, far outstripping population increase. Growth in output was achieved by increasing yields, with cereal productivity tripling from 1.2 to 3.3 tonnes/ha (FAOSTAT, 2004).

At the same time, agricultural productivity in sub-Saharan Africa has at best stagnated, and has even fallen in some places, while poverty in relative and absolute terms has increased. Nkamleu et al. (2003) calculate that, on average, total factor productivity in agriculture in 10 countries in sub-Saharan Africa decreased between 1972 and 1999 by 0.2% annually.

The relationship between poverty reduction and agricultural productivity has been studied in detail since the 1950s when 'development thinking' emerged as a separate discipline. One of the more recent and comprehensive studies illustrates the potency of this

relationship clearly. Thirtle et al. (2003) use data collected between 1985 and 1993 in 48 developing countries to show that for every 1% increase in recorded agricultural productivity there was a corresponding fall of between 0.6 and 1.2% in the number of people living below US\$ 1 a day. No other sector of the economy shows such a strong correlation between productivity gains and poverty reduction and Thirtle's conclusions are supported by a sizeable volume of literature (e.g. Lipton and Longhurst, 1989).

## **2.2 How does increasing productivity reduce poverty?**

Section 1 outlines the four transmission mechanisms that link improved agricultural performance, especially productivity increases, with poverty reduction. These are discussed in more detail below.

### **Direct impact on rural incomes**

Despite rapid urbanisation, poverty is still concentrated mostly in rural areas, and agriculture (although to a varying and changing degree) remains central to the livelihoods of the poor. For example, Maxwell (2001) suggests that some 70% of sub-Saharan Africa's workforce and 67% of South Asia's are at least partly engaged in agriculture. These figures suggest that any improvement in rural incomes should have a major impact on overall poverty – if only by sheer weight of numbers. Studies consistently show that agricultural productivity gains have raised rural incomes by directly increasing farmers' incomes and, of particular importance to the poorest, by increasing employment opportunities and wage rates (Thirtle et al., 2003; Leavy and White, 2000; Hossain et al., 2003; Hossain, 2002; Saxena and Farrington, 2003).

### **Lowering the cost of food for the urban and rural poor**

From the mid-1960s onwards, increases in production of staple foods have comfortably outstripped population growth in most developing countries. Only in sub-Saharan Africa have food supplies not kept pace with population growth. The significant increase in per capita supply, and the relatively low elasticity of demand for basic foods, has resulted in real world market prices of the major traded grains falling more or less continuously since the early 1950s. At individual country level, increased production of food grains has often had a dramatic effect on prices.

Reduced market prices have two main effects on consumers. Firstly, they enable poor households to buy food that they could not otherwise afford, thereby improving nutrition. Secondly, because poor households typically spend a high proportion of their domestic income buying food, lower prices free up household income for other needs e.g. health care and school fees. Many such households are in urban areas but there are also a significant number of rural farming households that are net consumers of cereals (i.e. they buy more than they produce), and they benefit in the same way.

### **Stimulating the non-farm economy**

Agriculture is the main root of economic growth in most developing countries. In Africa it provides two thirds of employment, generates over one third of Gross National Income (GNI) and over half of export earnings. In Asia, where economic growth and diversification

have been most rapid, agriculture still provides jobs for 60% of the working population and generates 27% of GNI. Given agriculture's relative dominance in the economy, it remains the most likely source of significant growth in most developing countries. More immediately, when agriculture performs well (or poorly), the impact is felt quickly, not just in the agricultural sector but also in the wider non-farm economy through the strong links (multipliers) which exist between agriculture and the rest of the economy.

### **Stimulating and sustaining economic transition**

Rapid economic growth, sustained poverty reduction and substantial wealth creation have historically occurred as a result of economic diversification. This is the process by which societies move away from being primarily agrarian to a situation where manufacturing and services play an increasing, and eventually dominant, role. History consistently shows that no country (a couple of small island states apart) has ever successfully industrialised without first achieving significant improvements in agricultural performance – particularly increased agricultural productivity. This holds true for Europe and North America, Japan, and the newly emerging industrialised countries of Asia, where industrialisation has been very clearly agriculturally led (Timmer, 1988).

## **3. The role of markets in the productivity /poverty relationship**

### **3.1 Initial concepts – market efficiency, coordination and failure**

In simple terms, a 'market' represents the interaction of buyers and sellers of any good or service. Markets are fundamental to the operation of an economy. Movements in supply and demand send signals to economic actors through changes in prices, and these guide the actions of individuals, for example, where to invest, or where to offer their labour. Where markets are 'efficient', supply and demand interact without impediment or distortion, and prices move quickly to reflect changes in the demand or supply of any good or service.

In any economy, markets for different goods and services are closely related and often interdependent: what happens in one market often has a fundamental impact on other markets and other economic activities. Effective 'coordination' of different markets is therefore critical to increasing the opportunities for exchange and interdependence that underlie growing and expanding economies (see Box 1). Beyond the most rudimentary of barter economies, it is hard to imagine a situation where markets are not interrelated and the efficiency of their interaction depends upon their coordination.

#### **BOX 1: Explaining Market Coordination**

Market coordination is the process that allows market agents to conduct their transactions timely, reliably and sustainably. Transactions must be timely to capture 'value addition': if goods are slow to reach the market, or to find a transaction partner, produce may

deteriorate or demand may have decreased. Transactions must be reliable if investments in market participation are to take place. If farmers can sell their output this season but perhaps not (or at very different conditions) in the next, they may not find it worthwhile to invest in market transactions at all. Likewise, output buyers may not invest if delivery of produce is ensured this season but not the next. Transactions must also be sustainable: they must be attractive to encourage both transaction partners to continue. For instance, if producers are systematically exploited through low or variable price setting (due to the larger market power of buyers) producers may not be able to continue to participate in the market.

From the theoretical perspective, when markets are efficient and fully coordinated, economies will be at their most efficient and will grow. Productive resources such as land, labour and capital will be allocated effectively between alternative and competing uses, specialisation will occur according to the principle of comparative advantage and the benefits of growth in one area of the economy will be effectively translated to other parts. In addition, economies will generate the maximum benefit to individuals – including the poor – as markets provide the vehicle through which people can engage in a growing economy.

The downside is that markets rarely, if ever, work in the perfect stylised manner described above. In many situations, markets are said to 'fail', and the degree of market failure will determine how well the economy can grow and generate economic opportunity. When markets can approach the theoretical ideals of efficiency and coordination, they are more likely to contribute to economic growth and the generation of opportunity, including for the poor. Conversely, when markets are characterised by inefficiency and poor coordination, growth will be slow with fewer economic opportunities generated. However, experience in Africa and Asia demonstrates that 'coordination' is unlikely to result from an 'invisible hand'. Indeed, the Green Revolution in Asia would not have achieved such dramatic results if it had received only a 'light touch' from the state; in fact, most countries were heavily involved in the coordination of input and output markets.

### **3.2 The importance of effective economic coordination**

Investments in instruments that can increase agricultural productivity will enable poor people to benefit from agricultural growth only when they are paralleled by simultaneous investments in market coordination. The extent to which farmers will invest and innovate (with the objective of increasing agricultural productivity) and the strength of the transmission mechanisms linking agricultural productivity with poverty reduction depend critically upon several factors, including the coordination of markets. Additional factors include adequate transport networks, a stable macroeconomic context, sufficient communications infrastructure to permit access to price information and secure and equitable access to land.

Where economies operate at reasonably high levels of coordination, farmers are encouraged to invest and innovate. They will be confident that they can access the purchased inputs they need to improve productivity, secure any necessary credit, get their product to market and have a fair idea of the final price they will receive. Such confidence will have a positive knock-on effect for growth in the wider economy. Conversely, where

markets are poorly coordinated, farmers will be less certain of input supplies, credit, access to markets, final price and so on, and will consequently be generally less willing to invest and innovate. This is particularly true for poor farmers for whom the cost of failure is high. In such a situation, market failure impedes the pace of productivity improvement to the detriment of growth and poverty reduction.

The degree of coordination in any economy is generally a function of the level of economic development. As economies become more sophisticated, the level of coordination tends to increase automatically. Developed economies are characterised by high levels of 'economic integration', brought about partly by infrastructure, and partly by the presence of more sophisticated economic institutions which provide a range of functions such as credit, banking and insurance. These help to link buyers with sellers through ever larger markets, creating a conducive environment for investment. Conversely, where economies are small and poorly integrated, coordination is inherently less.

The concepts of market coordination and market failure have been recognised for many years (Nelson, 1956) and market failure has been identified as an impediment to realising the potential of agricultural growth to poverty reduction (Ponte, 2001). There are numerous and diverging explanations as to why markets fail and how to get them to function better, but opinions tend to diverge on the question of the role of the state. The remainder of this chapter synthesises evidence on this issue and identifies areas of debate concerning how market coordination in the agricultural sector can be achieved. Two key questions lie at the heart of such a synthesis:

1. How can we stimulate and nurture the development of an exchange economy that promotes agricultural growth?
2. How can we improve the extent and terms of access to and beneficial participation in markets for the poor?

### **3.3 From states to markets: a short narrative on agricultural policy**

How have developing countries experienced the coordination of markets? For many, the post-independence period was characterised by strong state intervention in the agricultural sector and agricultural markets. Subsequent criticisms of failure to intervene effectively in markets led to promotion of the private sector and withdrawal of state intervention – in other words, liberalisation. This section explores the paradigms of agricultural market coordination by looking at agricultural policy, and discusses current thinking on the appropriate role of the state.

#### **State-led agricultural development**

In the immediate post-independence period, many developing country governments, with the support of their development agency partners, promoted agricultural and rural development as the cornerstone of development policy. A central element of policies at that time was a belief that the private sector was either too weak or too poorly motivated to act in the national interest. Therefore, the state had a clear role in correcting market failure in the interests of development. Throughout this period (1950s–1980s in most countries) the state played an active interventionist role in attempting to improve much of the world's

smallholder agriculture sector. Models of intervention varied significantly between regions and crops and over time, but generally, they involved some combination of the following:

- provision of key inputs, including irrigation, fertiliser, seed and credit, often at subsidised rates;
- guaranteed markets and prices; and
- creation of a network of organisations including parastatals, state-sponsored cooperatives and agricultural finance organisations to administer the system of state intervention.

The development and poverty outcomes of this model of state-led agricultural growth were very mixed. In some countries (mainly in Africa), large government expenditure and official development assistance focused on agriculture led to very little growth and the systems established to support agriculture became a huge drain on government budgets. In other countries (mainly in Asia), however, such state-led systems supported and produced the most dramatic and widespread processes of agricultural growth and poverty reduction seen in history.

So why did the same basic policy result in such widely different results? A review of policies in successful and partially successful Green Revolution areas found that the vast majority of transformations to higher growth and productivity involved, in the early stages, government interventions to stabilise output prices and maintain them somewhere between import and export parity prices, and to subsidise input supply and credit (Dorward et al., 2004). There are, therefore, certain necessary conditions for intensive cereal-based transformations and, in addition to high yielding technologies, there must be effective input, output and financial exchange systems offering producers stable and reasonable returns to investment in 'improved' technologies, together with reasonably secure and equitable access to land. In the successful Green Revolution, government intervention played a critical role in 'kick starting' markets by establishing coordinated exchange systems at a critical time. However, even in these areas, parastatals tended to become inefficient and ineffective (Dorward et al., 2004).

## **Critiques of state-led agricultural development**

By the early 1980s, many African countries were struggling to reap any benefits from their policies of heavy state involvement. At the same time, donor support diminished and then turned hostile towards state-led development approaches. Various criticisms were levelled at state-led development and many of them were directly related to agriculture, such as:

- Politicians, officials and, sometimes, rich farmers often had vested interests and used state activism as a convenient tool for extending their personal, party and state power and patronage into rural communities.
- Parastatals tended to become inefficient and ineffective. Their success led to large fiscal costs in price support, and the benefits these parastatals offered to politicians and bureaucrats made them difficult to reform. They also tended to provide a bad service to farmers, with late input delivery, sluggish produce purchase and payment, and corruption at the buying point.
- The allocation of subsidies distorted markets and was inefficient but was still a tempting instrument for governments wishing to suppress food price increases. Activity in the domestic economy was sustained, but led to outputs being produced at a higher

resource cost than would have applied if these outputs had been procured from the world market.

- Maintaining anti-competitive and oligopolistic structures held back market entry and stifled initiative and investment. It simultaneously drained public resources, inhibited macroeconomic stabilisation and diverted public expenditure.

## **Liberalisation**

Many of the criticisms levelled at parastatals were justified and, in Africa at least, the policy situation of the 1980s became indefensible and largely unsustainable. Consequently, donors and international agencies increasingly promoted (by more or less coercive measures) the liberalisation of economies. International donors, with government and non-government organisation (NGO) support (and opposition), encouraged privatisation or dismantling of agricultural marketing parastatals to deregulate markets and to eliminate credit, input and output subsidies.

These agricultural sector reforms matched the economy-wide need for a stable and favourable macro-economic environment with reduced public expenditure. They also tied in with the removal of tariffs and controls that had led to over-valuation of exchange rates. With time, increasing emphasis was given to 'social action funds', which assisted the poor who were likely to suffer in the short term from the stabilisation and liberalisation processes. More recently, institutions to support markets have been developed (see for example recent World Development Reports, World Bank, 2000a).

So, what was the outcome of these transformations? Unfortunately, agricultural adjustment and market liberalisation have not been widely successful in 'getting agriculture moving' in the poor rural economies where agricultural transformation has not already occurred. The agricultural sector in least developed countries (LDCs) shows low rates of growth during the 1980s and 1990s. Indeed, negative growth rates are recorded for 'value added' per capita over most of the period (World Bank, 2000b; FAO, 2000; Dorward and Morrison, 2000). LDC performance (which comprises mainly sub-Saharan African countries) contrasts markedly with that of Asian countries, where agricultural growth advanced ahead of population growth and labour productivity in agriculture continued to increase (World Bank, 2000b; FAO, 2000; Dorward et al., 2001). Although there is considerable heterogeneity within each region, there is a striking correspondence between patterns of agricultural growth and poverty reduction (or persistence) in recent years, with poverty incidence and severity generally falling in Asia (although only slowly in South Asia) while remaining static or even increasing in sub-Saharan Africa (Dorward et al., 2004).

While few would argue that the pre-liberalisation situation could or should have been sustained, liberalisation has not delivered the substantial agricultural growth needed to drive rural poverty reduction and improve food security. Despite the benefits (such as reduced food prices for processed staples for poor consumers in southern Africa, and positive impacts in supply chains for cash crops in some countries – see Poulton et al., 2004; Jayne and Jones, 1997), there has been a notable lack of success in developing input, output and financial markets that offer the attractively priced, timely and reliable services needed to intensify crop, particularly cereal, production.

## Concluding remarks

The story of agricultural market policy implementation and agricultural growth over the past 50 years or so is generally agreed, and there is consensus that growth requires:

- a minimum degree of good governance;
- a minimum level of infrastructure;
- labour-demanding productive opportunities arising from access to new exchange opportunities and/or new technologies for existing activities; and
- (more) equitable access to education, land, health services and productive resources such as water.

It is not surprising that disappointment with state-led agricultural policy and recent disillusionment with liberalisation has resulted in little agreement about the face of future agricultural policy and strategy. The next section further explores the debate about what agricultural policy can and should do to improve the ways in which markets can benefit the poor.

### 3.4 How can markets be made to work better?

Economists embroiled in the state-led versus market-led development debate on policy in agriculture for the poor hold two broad views: 'market failure' and 'embedded markets'. Each has a different conception of what constitutes a working market and, subsequently, a different view of the appropriate role of the state. The policy implications for each are also different.

#### Market failure: partial liberalisation and weak institutions

Within this school of thought, explanations for liberalisation failures (and ensuing policy prescriptions) are essentially supportive of the overall logic of the liberalisation agenda. Views of partial liberalisation and weak institutions (particularly in the latter case) recognise the importance of state support for institutional public goods necessary for markets to work (see Box 2). However, the market remains the dominant mode of organisation in advanced economies and is, by implication, the most efficient. The central challenge is to extend this 'working' market situation to poorer countries and, in particular, to their poorest communities; in short, to 'make markets work for the poor'.

#### **BOX 2: Partial Liberalisation and Weak Institutions**

Explanations of market liberalisation failure based on ideas about partial liberalisation and weak institutions are broadly supportive of the liberalisation agenda but critical of its implementation. Thus, the 'partial liberalisation' view suggests that problems with market liberalisation result from a failure to implement change thoroughly (Kherallah et al., 2000; Jayne et al., 2002). Partial rather than complete withdrawal of the state together with real or perceived threats of policy reversals and continued price controls and competitive advantages for parastatals have depressed returns and increased risks to private sector investment.

Similarly, the 'weak institutions' view explains slow market development in terms of weak institutional support to market and private sector development (for example World Bank, 2002; World Bank, 2003), with cultural, political and legal factors undermining clear property rights and hence private investment incentives. Here the liberalisation agenda that attempted to avoid the problem of state failure in market interventions has run up against different problems of state failure. These concern the delivery of public goods – i.e. the institutions and infrastructure needed for privatised competitive markets to operate in the challenging conditions where poverty is most intractable.

The resulting policy agenda emphasises completion of the market liberalisation process, accompanied by additional (public good) measures to address problems affecting financial markets and remote producers. These additional measures include:

- increasing investment in infrastructure, legal and market institutions, and agricultural support organisations (research and extension);
- promoting smallholder production of export crops; removal of developed countries' protectionism and poor countries' own restrictions on external and internal trade;
- tackling concentrations of local power which force the poor to access markets (such as credit) on highly adverse terms;
- providing short-term targeted support for vulnerable groups in remote areas (e.g. 'safety net' transfers);
- implementing credible and sustainable macro-economic policies;
- implementing institutional innovations for input credit, such as contract farming and group approaches (World Bank, 2000a); and
- replacing non-tradable rights to resources based on community membership with tradable property rights to land, water and buildings.

The sense of 'working' markets to which the above measures apply assumes that the problems preventing the markets from functioning adequately are relatively limited. It also assumes that the broader conditions required for markets to work are already met. These include an economic environment of labour specialisation and a monetary system, political and macro-economic stability, sufficient levels of education and social capital and so on. This may be an appropriate assumption for developed economies but, as some argue, it is not necessarily the case in developing economies.

### **Institutions and market coordination: embedded markets**

The second view is more critical of the logic of liberalisation and suggests that, in poor economies, markets will fail if states do not coordinate them beyond a narrow range of public good interventions. This implies that state involvement, of some sort, is a necessary condition for markets to work. The question is not whether states should intervene in markets, but how the state should support market development.

In common with weak institutions and partial liberalisation views, this view believes that the ability of market agents to transact can be undermined by insufficient information, high search costs and physical barriers to access. However, it is not assumed that the broader conditions required for markets to work are always in place. Omamo and Farrington (2004) suggest further reasons why markets fail (beyond those that can be overcome through narrow public goods interventions, as given above):

- Barriers to entry include the fixed costs associated with building trust and reputation, and those of information and knowledge acquisition. Market entry is also impeded by increasing returns to scale. Agricultural inputs are indivisible and are often characterised by economies of scale. Farmers typically need to invest beyond some threshold level in order to reap the gains of higher productivity. If most farms have very limited investment capacity, this excludes the bulk of farmers from access to technology. A cycle is triggered whereby small-scale farmers use very little fertiliser, remain focused on subsistence agriculture, which offers low returns, and cannot benefit fully from markets. Simultaneously, low demand for fertiliser prevents market entry by fertiliser suppliers.
- Increasing returns to scale and minimum investment thresholds also exist in marketing, particularly to foreign markets. Such scale economies may deter entry by agribusiness firms to input and output markets. When there are too few farms, or too small an output volume in any one market, returns to investment are too low to be attractive.
- Larger-scale farmers often deliberately attempt to sustain market imperfections by maintaining economies of scale and by building information exchange networks based around social capital, which can exclude newcomers.
- Non-insurable risks are another major pervasive problem. While risk levels in African agriculture are high, at least those related to natural causes (e.g. pests and diseases) and business risks (e.g. transport problems and theft) are, in principle, insurable. However, insurance markets work imperfectly and, in certain cases, have exceptionally high premiums. Several additional risks (e.g. political interference) are uninsurable.

It is typically beyond the capacity of individual market agents to ensure that all transaction-enabling factors are present and there is a need for coordination by a third party. The policy implication is that markets need to be 'embedded' in a sensible policy framework if they are to work. Policy suggestions include, but supersede, those implied by the 'market failure' view. States should not only provide roads, health care, education, property rights, information and anti-monopoly regulation. In this view, they should also address issues of risk insurance, social capital building, intermediation and coordination between market parties, and make initial investments to establish a minimum market size that will attract private players.

### **Is the state the only/best institution to ensure market coordination?**

The role outlined above can be filled by the state, but an emerging body of literature (Dorward et al., 2004; Fafchamps, 2004) identifies other institutions that might play coordinating roles (or undertake certain aspects of coordination). These include farmers' associations, civil society organisations and private companies.

Proponents of this view point to extensive state involvement in the growth and industrialisation of developed countries and to more recent growth successes, such as newly industrialising countries (NICs) in Asia, including successful Green Revolution transformations. They also draw attention to the very substantial proportion of transactions in developed economies that are not conducted within competitive markets, but within private companies and bureaucracies (Coase, 1992; Williamson, 1985 and 1991; Hall and Soskice, 2001). The proportion and amount of transactions occurring within private companies globally is growing, and two thirds of world trade is now either conducted within

transnational corporations (TNCs) or associated with TNCs (United Nations 1999; cited by Yusuf, 2001).

Alternative forms of transactions take place away from conventional markets and are described as hierarchies. A view is emerging in some quarters that hierarchies, rather than markets, may present the best opportunity for efficient transactions. Thus, Fafchamps (2004) argues that large organisations, or hierarchies, should become the main context for development of exchange systems, and should replace markets. Africa generally lacks such organisations; many transactions occur in open markets, not in hierarchies. The question then becomes not how to make markets work for the poor, but how to make hierarchies work for the poor.

### **Market coordination: concluding remarks**

The two positions outlined in this section (those of 'market failure' and 'embedded markets') translate broadly into the two chronological stages in agricultural policy development. While they are based on fundamentally different views of what constitutes a working market, their policy implications partially overlap. However, the clearest contrast between them, in policy recommendations, is with regard to the structural adjustment programmes (SAP) and the wider liberalisation agenda.

In the 'market failure' view, SAPs (if completely implemented) dispense with policies that are costly, that stifle markets rather than help them develop, and that breed 'rent-seeking' and corruption. For markets to function optimally, state intervention must be restricted to cases of market failure, mostly related to public goods. It is argued that, in practice, most SAPs went only some way towards that goal and, in most cases, efforts should be made to complete the process. The main reason for agricultural market failure is seen as the fact that liberalisation was badly and incompletely implemented and that much state meddling remains.

In the 'embedded markets' view, liberalisation 'threw the baby out with the bath water'. While reducing rent-seeking and corruption by excluding the state from many areas, SAPs also left the economy in general, and the agricultural sector in particular, with too little market coordination overall. Future policy efforts should therefore aim to improve the quality of market coordination by states and firms private companies. Currently, the main reason for agricultural market failure is that essential state functions have been abandoned without being replaced by private sector activity, and much of the remaining policy of state involvement is badly implemented.

## **4. Enabling transmission mechanisms and social exclusion**

Improving mechanisms for the coordination of markets, thereby maximising growth in agriculture, is the main key to poverty reduction because it increases the wealth generated by the agricultural sector. However, if this growth is to benefit the poor, the dividends of growth must be passed on through the four transmission mechanisms identified in

Section 1. Where markets are poorly coordinated, transmission mechanisms also operate poorly – but this is not the only factor. Social exclusion is an equally important problem that limits the extent to which transmission mechanisms enable the poor to benefit from agricultural growth.

## 4.1 Types of social exclusion

Exclusion is difficult to define, with social and economic exclusion often presented as opposite sides of the same coin. For the purposes of analysis, it is useful to divide exclusion as:

- Direct economic exclusion on the basis of capacity: for example, a cattle herder employed by a rich farmer will struggle to retain his/her employment if animals are repeatedly lost. Similarly, a taxi driver who has frequent crashes will be unlikely to keep many customers. There is little that policy can do in response to this.
- Indirect economic exclusion on the basis of capital assets: for example, when the poor cannot afford to educate their children, the children also become excluded from better-paid employment. It is possible to devise policies to respond to this kind of exclusion in the long term but it is difficult in the short term.
- Pure social discrimination: this is based on caste, class, tribe, religion, and gender. Policies can be implemented to limit this type of exclusion but, as discussed below, adequate capacity to support/enforce the policy is also required.

This typology has several limitations, for example, it is difficult to distinguish between gender exclusion on the basis of productivity capacity and pure gender discrimination. It does, however, highlight the complex weave of economic and social factors in many situations.

## 4.2 How is exclusion manifested?

Exclusion has implications for the efficiency of markets, especially for the poor. The two main processes are 'segmentation' and 'interlocking'. Segmented markets are the result of any form of non-economic discrimination that does not include discrimination by skills, productivity, actuarial risk (in finance and insurance markets), but does include:

- gender discrimination: for example, women are paid significantly less than men and the difference is often more than can be justified on productivity grounds (Deb et al., 2002); women also have less choice over the activities and markets they can engage in;
- discrimination on the basis of religion or ethnicity: for example discrimination by ethnicity or race in Peru (Saavedra et al., 2002) or on the basis of tribe in India: and
- discrimination on the basis of social status: for example the caste system in India.

Segmentation can significantly reduce the returns to poor households of engagement in markets. Research in India shows that, for similar inputs or outputs, the poor receive lower returns than higher classes (see Box 3).

### **BOX 3: Segmented Markets in India**

In Madhya Pradesh, agricultural labour wage rates vary by crop, task, season, location, labourer and regional productivity. However, there are clear disparities in bargaining power,

information on opportunities and terms of employment. Poor and landless families take any work they can find locally. They are less likely to hear of more remunerative opportunities further afield and they cannot usually afford to travel for agricultural work. Women often receive between 20 and 50% less pay than men for identical work, except for low status work such as paddy weeding.

In Andhra Pradesh, land markets are similarly segmented. Leasing gives households access to land with assured irrigation but many landowners prefer to lease only to their own caste. When poor and lower caste households do successfully lease land from higher castes, the terms are less favourable than those offered to higher caste households.

Source: Ashley et al. (2003)

Interlocking occurs when households find themselves borrowing from, working for, hiring land from and selling harvests to a single landlord/employer/moneylender. Immediate household needs may lead poor households into necessary, but unhealthy, patron–client relationships, and the resulting balance of power means that the creditors are able to impose unfair conditions on their debtors, who have no choice but to comply. Interlocking can impede entrepreneurial capacity and trap the poor in low-return activities (Figure 1). Ashley et al. (2003) comment: 'Interlocking markets are particularly open to abuse because the terms of all transactions are inter-related and the low returns offered are much easier to conceal from the moral and competitive scrutiny of others in society'.

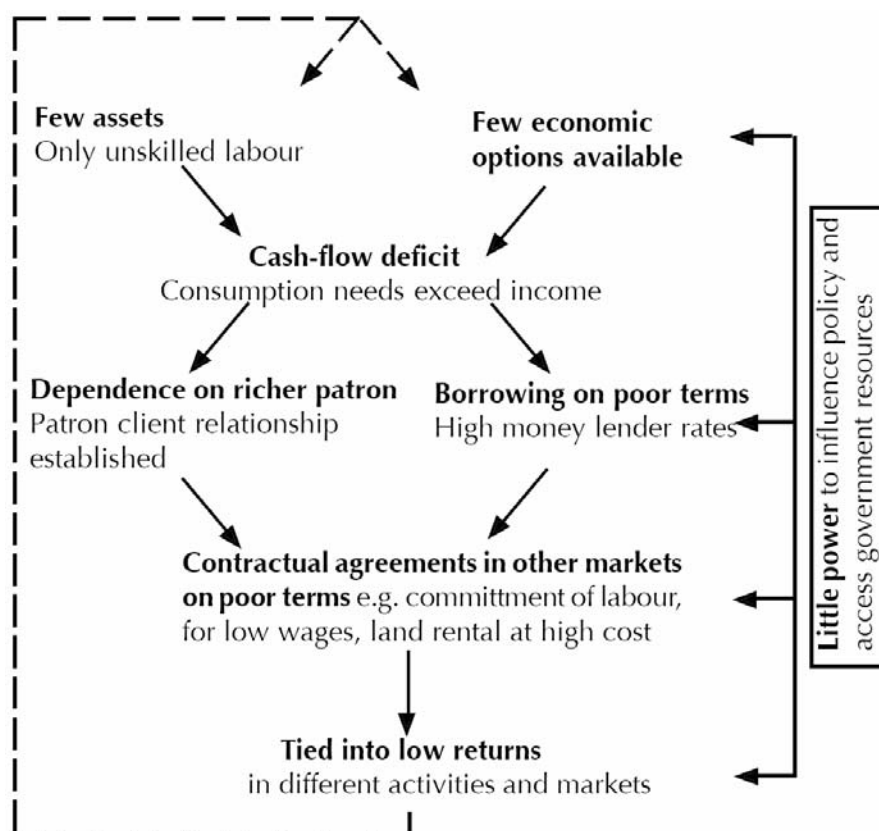


Figure 1: How the poor get trapped in interlocking markets  
Source: Ashley et al. (2003)

Other perspectives on interlocking cast a more positive light. Deb et al. (2002) suggest that interlocking provides a risk aversion mechanism for poor households. Policies that stimulate competition between landlords and traders and that reduce the cost of information or make wage rates and interest rates more transparent can improve terms of engagement for the poor. It is more difficult for lenders and landlords to set and conceal low wage or high interest rates when they are subject to greater competition and information sharing. Governments can also help landlords and traders to increase their market share without setting poor terms for debtors in interlocked markets by encouraging investment in crop processing (Dorward et al., 1998).

It is important to note that it is not just economic relationships between individuals and households that can become interlocked. Marketing parastatals in Africa during the state-led phase of agricultural policy offered credit, supplied inputs and guaranteed purchase prices to individual farmers. However, the vested interests within parastatals constitute a significant hazard for the terms of engagement of farming households (Jayne and Jones, 1997).

### **4.3 How does exclusion affect transmission mechanisms?**

The impact of exclusion on transmission mechanisms is direct and significant for some and indirect and less important for others. Beyond a broad discussion of the voice of the rural and urban poor in agricultural commodity price support, there is relatively little to say about how exclusion affects the price of food for the poor. Similarly, the potential for agricultural growth to stimulate and sustain an economic transition is partially affected by the way exclusion impedes entrepreneurship and innovation and how exclusion causes allocation inefficiencies. However, the impacts of agricultural productivity and growth on rural incomes and the non-farm economy are much more significant.

#### **Exclusion and rural incomes**

The potential for the poor to benefit from increases in rural incomes is limited by their inequitable engagement in labour markets. Agricultural growth may be achieved primarily through exploiting the pool of surplus rural labour and may not benefit the poorest labourers first (see Box 3 for examples). For those with access to land, subsidies designed to push up agricultural productivity tend to reach only certain groups of households. Often those who are already relatively well off benefit the most. For example, subsidies in India (e.g. canal irrigation, power for pumped irrigation, fertiliser, guaranteed purchase schemes) – in total 13% of agricultural Gross Domestic Product (GDP) – benefit mainly richer farmers in richer states (Gulati and Narayanan, 2003). Exclusion therefore often reduces incentives for innovation and entrepreneurship amongst small-scale farmers.

#### **Exclusion and stimulating the non-farm economy**

Options for the poor to diversify into the non-farm economy are limited by occupation-based exclusion. The most obvious example is the Indian caste system, which prescribes peoples' occupations from birth with little room for manoeuvre. A second example is the gender division of labour, which pervades societies across the globe. Where people are tied

to a single occupation or activity the scope for entrepreneurial activity and innovation outside agriculture is severely hampered.

## **4.4 Policy options for reducing the negative affects of exclusion**

So, what can be done to overcome social exclusion and what might be the implications for agriculture in poverty reduction efforts? Experience of policy options is limited as it is only relatively recently that exclusion issues have been linked to agriculture and poverty reduction.

In developed countries, legislation generally protects people from discrimination. This is also the case in some developing countries, but there may not always be adequate capacity to transfer rights into practice or to enforce such laws.

In India, overcoming exclusion has focused on three main areas: a) rights-based interventions against discrimination (through legislature); b) reservations policies (where jobs in the government/public sector are reserved for particular social groups); and c) economic empowerment for deprived groups. This three-way split highlights some important principles for encouraging transmission mechanisms to contribute to poverty reduction.

First, there is a need to distinguish between tackling discrimination as a rights issue, and because it causes market imperfections, thereby limiting the effects of agricultural growth on poverty reduction. The two are not the same and may, in some circumstances, precipitate contradictory outcomes. For example, positive discrimination and affirmative action can lead to allocation inefficiencies that reduce the potential for growth and poverty reduction. Finding an appropriate balance between rights-based and market-based responses remains a central challenge.

Second, while exclusion can reduce the potential for agricultural growth and productivity gains, the outcomes of exclusion can also form components of risk-avoiding strategies. For example, while interlocked markets offer lower returns, they also offer reduced risk and greater security of (albeit reduced) income. Thus, there is a need to take account of risk and vulnerability when discussing how to tackle market exclusion.

## **5. Closing the evidence gap**

It is well accepted that agricultural growth will lead to poverty reduction. However, there is little agreement on how to get markets working so that the dividends of growth are maximised or how to ensure that these dividends reach the poorest people.

### **5.1 States and markets**

The state versus market debate has oscillated from one extreme to the other and there has been much generalisation of different positions in the discussion. Critics of state-led

development and the subsequent liberalisation processes are in danger of 'throwing the baby out with the bath water'. In other words, it is not disputed that state-led agricultural development and state coordination of markets in the post-independence era resulted, in many cases, in market failure. However, the response perhaps should have looked more at combating poor coordination and less at getting rid of coordination completely.

Emerging perspectives on the role of the state in market coordination suggest two things:

1. Given the role of agriculture in pro-poor growth, there are strong arguments for state coordination of agricultural markets, especially commodity and labour markets, to be viewed as a public good.
2. It is not only the state that can provide a coordinating role in markets. Farmers' or labour organisations can contribute to overcoming price information asymmetries and the private sector, for example through TNC supply chains, may offer an alternative system of exchange.

How far the state's role in providing public goods should go is, however, a moot point. For some it extends to establishing an enabling macro-environment (especially political and macro-economic stability, and sufficient levels of education and social capital). For others it extends further to addressing inequalities in capital assets (including social capital), and addressing risk and vulnerability.

Regarding the role of farmers' and labour organisations, there has been only limited systematic review of the prospects for alternative systems of exchange to contribute to poverty reduction and further work needs to be done.

## **Responding to exclusion**

Better coordination of markets will ensure that the poor benefit from agricultural growth because technical fixes to market coordination will not overcome exclusion by caste, class, gender, religion, etc. Thus, markets can only be made to work for the poor if there is social change to overcome exclusion. The problem is that we know little about how to achieve this and which instruments are appropriate. We do not understand the links between rights-based approaches that combat discrimination, and attempts to encourage inclusion within agriculture specifically.

Finally, the manifestation of social exclusion (for example in interlocked markets) can overlap with strategies for reducing risk. The poor may trade off exploitation against risk – leaving responses to exclusion and exploitation susceptible to counter-intuitive effects. Again, we understand little about how this works.

## **5.2 'What' questions versus 'how' questions**

In their review of agricultural policy and policy processes in Africa, Omamo and Farrington (2004) note: 'Although reversions to heavy state control of agricultural production and trade are unlikely, much more is required of agricultural policy than mere liberalisation of given markets if sustained agricultural growth is to be achieved. Equally large challenges face agricultural policy research. Analysts cannot simply list the requirements of sound policy, or merely itemize what governments should do. Increasingly, the key questions

appear to revolve around how precisely to achieve or avoid given outcomes; how to, say, sustainably improve smallholder farmers' access to specialized inputs and credit. Herein lies the problem, for these questions have yet to receive sustained attention from scholars and remain largely unanswered'.

Thus, after exploring the causes of market failure in Africa, and identifying a series of institutional constraints, Omamo makes a strong argument for focusing attention, not on what needs to be done about markets, but on the precise mechanisms and processes that need to be employed. This - the 'how' question - he argues, should guide policy research as it will help identify appropriate responses to the problem of market coordination.

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