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STRATEGIES FOR SMALLHOLDERS IN DEVELOPING COUNTRIES: COMMERCIALISATION, DIVERSIFICATION AND EXIT

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Abstract

This paper proposes a strategic framework for policies to assist smallholders in developing countries. It describes the inevitable features of structural change in the agricultural and rural economy, the associated pressures that these changes place on smallholders, and the consequent need for policies to facilitate rather than impede adjustment. A key premise of the framework is that, for the majority of smallholders, the long term (*i.e.* inter-generational) future lies outside the sector. Hence, long-term policies need to make a distinction between those who potentially have a competitive future in the sector and those who do not. In either case, many of the necessary policies will not be agriculture-specific, so it is important that agricultural policies are framed in a broader economy-wide framework. In addition, a clear distinction needs to be made between short-term policies to reduce poverty and food insecurity and long-term policies to stimulate development. This is because there are inter-temporal trade-offs (as well as complementarities) between policies that are likely to be effective in the short-run, and those promising most impact over the long-term. The paper discusses the role of different agricultural and non-agricultural policies in providing the appropriate policy mix in countries at different stages of development.

Keywords: smallholders, rural development, agricultural policy, structural change

JEL codes: O20, Q18, R23

1. INTRODUCTION

The first Millennium Development Goal (MDG1) calls for the eradication of extreme poverty and hunger, with a specific target of halving between 1990 and 2015 the proportion of people living on less than a dollar a day. The world as a whole may achieve this target, thanks primarily to rapid income growth in East Asia (and China in particular). But in many parts of the world, progress has been weak or non-existent. Using a recently updated income benchmark of USD 1.25 per day, the *number* of poor is actually increasing in Africa and South Asia (Chen and Ravallion, 2008). Between 1981 and 2005, the incidence of poverty in South Asia fell from almost 60% to 40%, but because of population growth that was not enough to bring down the numbers of poor. In Sub-Saharan Africa, the situation was even worse: the incidence of poverty was virtually unchanged between 1981 and 2005, at around 50%, which implied that the number of poor almost doubled from 214 million to over 390 million. By this measure, Africa's share of the world's poor increased from 11% in 1981 to 28% in 2005. Some modest signs of progress in recent years (since 2000) were arrested by the recent increase in world food prices, which the World Bank estimated was severe enough to throw another 100 million people into poverty (Ivanic and Martin, 2008). Prices have since fallen back, but remain considerably higher than they were in the first part of the decade.

If broader based progress on MDG1 is to be achieved, then average incomes will need to increase much more rapidly in the next five years than they have done in the past twenty. Given that three quarters of the world's dollar a day poor live in rural areas (corresponding to 880 million people), and most depend on agriculture for their livelihoods, there is a particular need for faster development of *rural* incomes. This in turn requires carefully thought out agricultural and rural development policies, and a specific consideration of what to do about smallholders, who form the backbone of developing country agriculture.

The importance of faster agricultural and rural development has been recognised by policymakers. In the case of Africa, for example, the African Union's 2003 Common African Agricultural Development Programme (CAADP) framework sets a target of 6% for agricultural growth, while under the 2003 Maputo Declaration its members are committed to allocate at least 10% of public expenditure to agriculture and rural development. On the donor side, the G8 pledged in 2008 to provide EUR 1 billion of support for investment in African agriculture.

The food price crisis has also led to international commitments to allocate more money to agriculture. The World Food Programme appealed for additional funds and had received more than USD 1 billion by the end of 2008; the World Bank launched a $1.2 billion Global Food Crisis Response Program in mid 2008; and the FAO presented a USD 1.7 billion Initiative on Soaring Food Prices in June 2008 (Abbott, 2009). Bilateral donor countries also pledged additional resources to address problems in developing countries stemming from the food crisis (GDPRD, 2009). As food prices have fallen back, the legacy of the crisis has been that it has drawn attention to the deeper need for short, mid and long-term measures to tackle food insecurity and poverty. The UN High-Level Task Force on the Food Security Crisis advocated a two pronged approach, focusing on emergency relief and renewed efforts to invest in agricultural development, with a particular emphasis on supporting smallholder agriculture. With prices now lower (albeit still above average levels over the past ten years), the emphasis has shifted to the chronic lack of smallholder development, with strong support for so-called "smart" subsidies for seed and fertiliser.

The purpose of this discussion paper is to give consideration to what constitutes an effective strategy for smallholders in countries at various stages of development, both in the short term in terms of reducing poverty and hunger (or constraining increases that would flow from adverse shocks) and over the longer term, in terms of promoting economic development and wider employment opportunities. The main thesis is that while there are some instruments that can be beneficial irrespective of the time horizon, there are

nevertheless difficult trade-offs between short and long term priorities, and a strategic framework for smallholder development needs to acknowledge those trade-offs.[1]

It is important to define at the outset what we mean by smallholders. Here the term is taken as shorthand for farm households which struggle to be competitive, either because their endowments of assets compare unfavourably with those of more efficient producers in the economy or because they confront missing or under-developed markets. A limiting factor may be insufficient farm size, although other assets, such as farm management skills may also be lacking. It is important to note that what constitutes a small farm may differ markedly from one country to the next. For example, the average farm size in many Asian countries is less than a hectare, whereas much larger operations in Latin America may be considered as small.

The structure of the paper is as follows. Section 2 provides an overview of the broad experience across countries of agricultural development and structural change. This helps provide context on the evolving role of smallholders in the economy, and points to some principles that need to guide policy formulation. Section 3 contrasts those principles with actual agricultural policies and approaches to smallholder development. Section 4 proposes a strategic framework for smallholder adjustment which seeks to reconcile the short run objective of poverty alleviation with the long-run aim of facilitating development. Section 5 presents some conclusions and identifies some priorities for further policy analysis.

2. STRUCTURAL CHANGE IN THE RURAL ECONOMY

The process of economic development is characterised by three main empirical regularities that are of relevance when considering the strategic options for smallholder development. These are the *sectoral* transition away from an economic structure based on agriculture to one dominated by manufactures and services, the *spatial* tendency towards increased urbanisation, and an *institutional* transformation from an economy based largely on informal rules to one based on formal legislation (Jonasson, 2009). In its 2008 *World Development Report*, the World Bank makes a distinction between agriculture-based, transforming and urbanised economies that captures the first two elements of this economic transformation.[2] Countries tend to move through these categories, although they may experience short cuts in the process, such as learning from policy experiences in urbanised economies, or take detours due to such factors as civil war, corrupt government or a misallocation of public resources. These changes have important implications for the design of agricultural and rural policies.

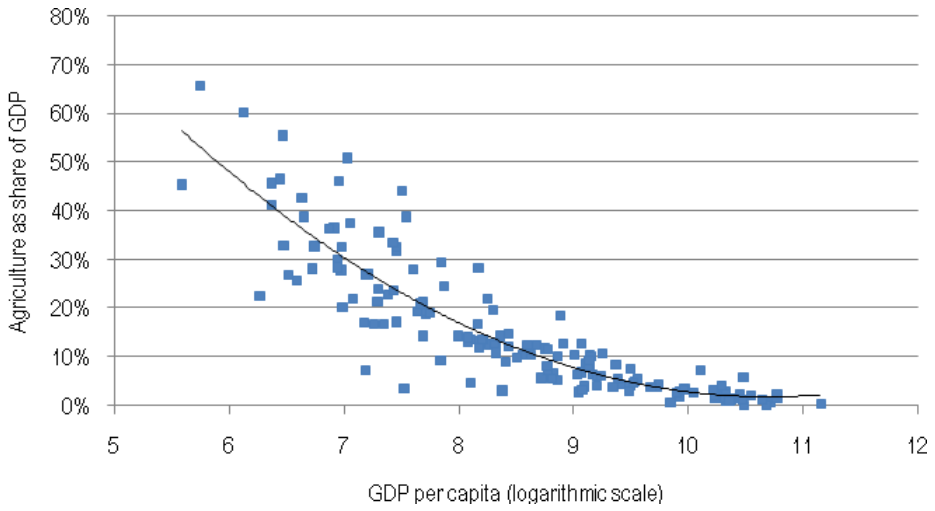
[1] The paper builds on an earlier paper by Cervantes-Godoy and Brooks (2008), which considers the issue of smallholder adjustment in middle income countries.

[2] According to this classification, agriculture-based economies are those in which agriculture contributes 20% or more to overall economic growth; transforming economies are those in which agriculture contributes less than 20% to total growth yet 60% or more of the country's poor live in rural areas; while urbanised economies are those in which agriculture contributes less than 20% to overall growth and less than 60% of the poor live in rural areas. More than 80% of the rural poor in Sub-Saharan Africa live in agriculture-based countries, while over 90% of the poor in Asia, the Middle-East and North Africa live in transforming economies. A majority of Latin America's poor live in urbanised countries, although nearly one-half of the poor still live in rural areas. There are virtually no countries where agriculture contributes more than 20% to growth but in which the numbers of urban poor exceed the numbers of rural poor. Among developing countries, there is a strong correspondence between these three categories and three income classes for countries (low income, lower-middle income and upper-middle income) also specified by the World Bank.

2.1. The sectoral transformation

The sectoral changes associated with economic development are evident from the cross-country relationship between agriculture's share of GDP and GDP per capita. Figure 1 provides a scatter plot of these two indicators for 180 countries in 2005. For countries with a GDP per capita of USD 2 000 or less (approximately 7.5 on the logarithmic scale), it is still not uncommon for agriculture to constitute 30 percent or more of the economy. As per capita income rises above USD 10 000, practically no country has an agricultural sector that accounts for more than 10 percent of GDP.

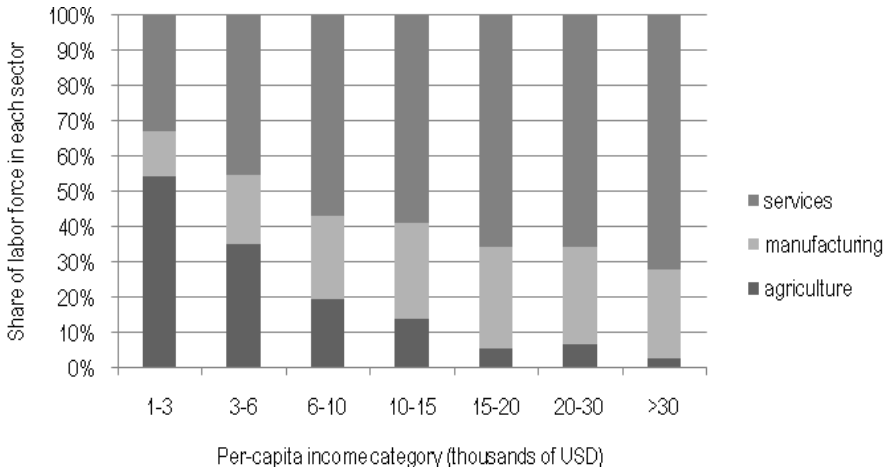
Figure 1. Share of agriculture in GDP and per-capita GDP.



Note: 180 countries; GDP per capita refers to 2005 PPP USD. *Source*: World Development Indicators, 2009.

The change in employment patterns largely mirrors this transformation. Figure 2 shows the average shares of employment in agriculture, manufacturing, and services for 120 countries, divided into seven income categories. On average, half of the labour force in the poorest countries is occupied in agriculture. This share falls quickly with income, and for countries that have a per-capita income of USD 15 000 or higher, the service sector generally occupies two-thirds or more of the labour force, manufacturing most of the remainder, and agriculture just a few percent.

Figure 2. Employment shares in agriculture, manufacturing, and services

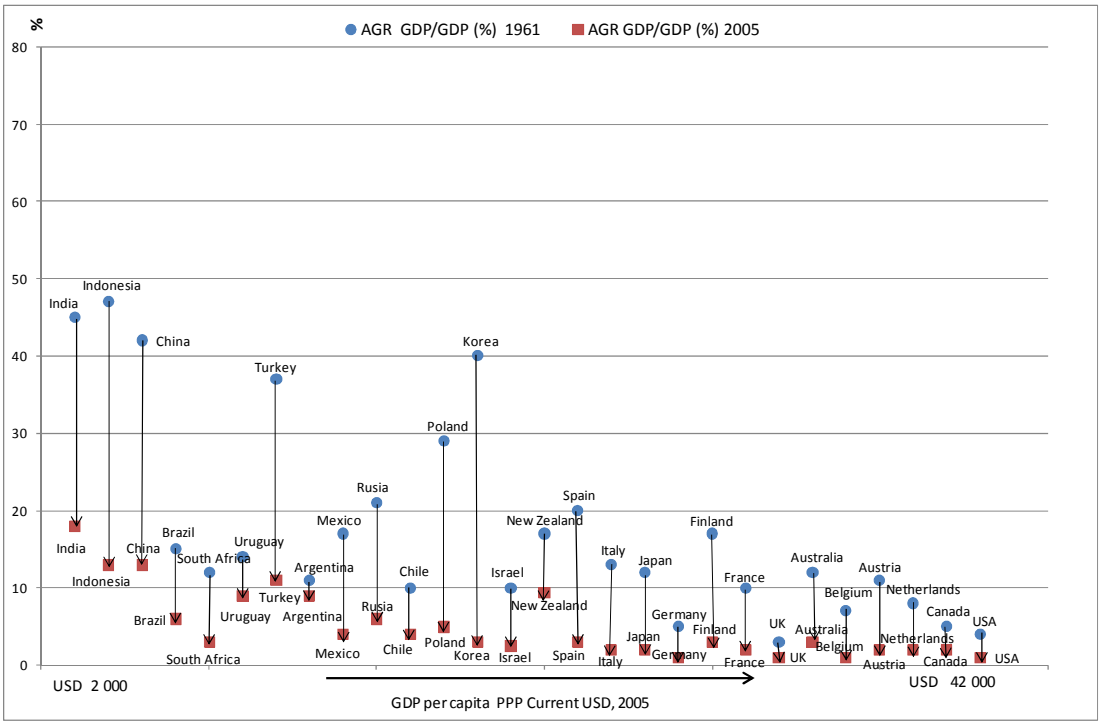


Note: 120 countries; income categories are based on GDP per capita 2005, PPP USD.
Source: Author's calculations based on World Development Indicators, 2009.

Further insights are apparent from the historical experiences of a more limited group of transforming and urbanised economies. Figure 3 shows how agriculture's share of GDP changed between 1961 and 2005, with countries ordered according to their GDP per capita. The graph re-emphasises the strong inverse correlation between agriculture's share of GDP and GDP per capita, with high income OECD countries typically having no more than 2%-3% of GDP generated by their farm sectors. A second, and consistent, feature is that agriculture's share of GDP has declined in *all* countries, including those with a strong comparative advantage in agricultural activities. A third point is that the decline of the share of resources in agriculture has been larger for countries with lower incomes, which have more scope for agricultural productivity improvements and for shifting resources into new non-farm activities (in developed countries, that shift has already occurred).[3]

[3] There are some exceptions, such as Brazil and Chile, where the changes have been large in absolute terms, but low relative to other countries at similar income levels. In these particular countries, import substitution industrialisation policies led to a rapid growth in manufacturing prior to the base year, bringing down agriculture's share of GDP; while more recently the liberalisation of policies has mitigated the tendency of resources to shift out of agriculture, as these countries have exploited their natural comparative advantage in agricultural activities.

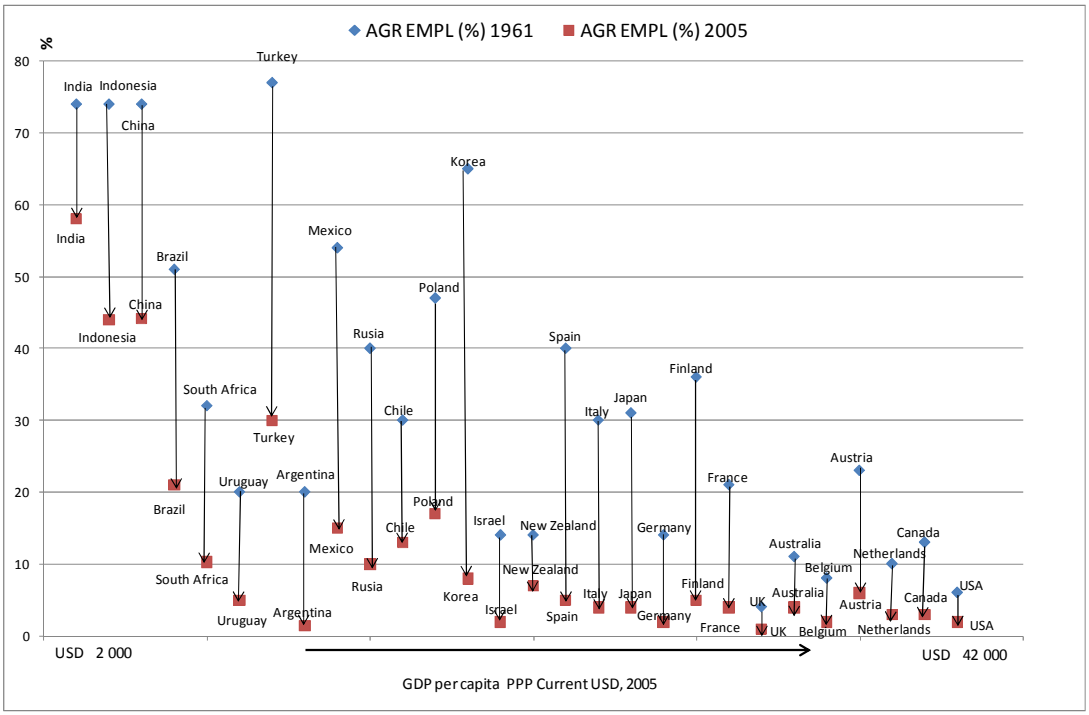
Figure 3. Evolution of agriculture's share of GDP in various countries (1961 and 2005)



Source: FAO (1999); WDI (2008); IMF (2008).

Similar patterns are observed when one looks at the evolution of agriculture's share of employment over the same period (Figure 4). A key feature here is that, for most middle income (transforming) countries, the decline in agriculture's share of employment has been more rapid than the fall in the sector's share of GDP, reflecting stronger gains in labour productivity than in other sectors. Also, whereas agriculture's share of GDP has fallen substantially for nearly all developing countries, the labour adjustment has been larger for middle income countries than for lower income countries such as India. The reason here would appear to be that while non-agriculture's share of GDP is rising across countries, it is in the middle income (transforming and urbanised) countries that alternative employment possibilities have become more widely available and the transition of labour out of semi-subsistence farming has really got underway.

Figure 4. Evolution of agriculture's share of employment in various countries (1961 and 2005)



Source: FAO (1999); WDI (2008); IMF (2008).

What is clear is that, once the sectoral transformation is underway, its pace is more rapid than in the past (Table 1). Whereas it took a century or more for agriculture's share of GDP to fall from 40% to 7% in OECD countries that went through the industrial revolution early, middle income countries are effecting these changes in three decades or less. This accelerating change is matched by a rapid release of labour out of the sector. In Korea, agriculture's share of employment fell from 40% to 16% in just 14 years – a transition which took 53 years in the United States and 68 years in the United Kingdom (the first country to go through the industrial revolution).

Table 1. Pace of adjustment in various countries, based on agriculture share of GDP and employment

	Agriculture share of GDP			Agriculture share of employment		
	Year of 40%	Year of 7%	Years required	Year of 40%	Year of 16%	Years required
Netherlands	1800	1965	165	1855	1957	102
Denmark	1850	1969	119	1920	1962	42
UK	1788	1901	113	1800	1868	68
Chile	1875	1980	105	1950	1993	43
Mexico	1890	1992	102	1969	2000	31
USA	1854	1950	96	1897	1950	53
France	1878	1972	94	1921	1965	44
Brazil	1910	2003	93	1960	2005	>45
Germany	1866	1958	92	1900	1942	42
Japan	1896	1969	73	1940	1971	31
Poland	1935	1991	56	1968	2006	>31
India	1962	2006 (17.5%)	>44	2005 (58%)		--
China	1967	2006 (11.7%)	>39	2006 (43%)		--
Turkey	1970	2007 (8.9%)	>37	1998	2007	>9
Korea	1965	1991	26	1977	1991	14
Indonesia	1971	1997	26	2006 (42%)		--

Source: Adapted from Kim, H. and Lee, Y.K. (2003).

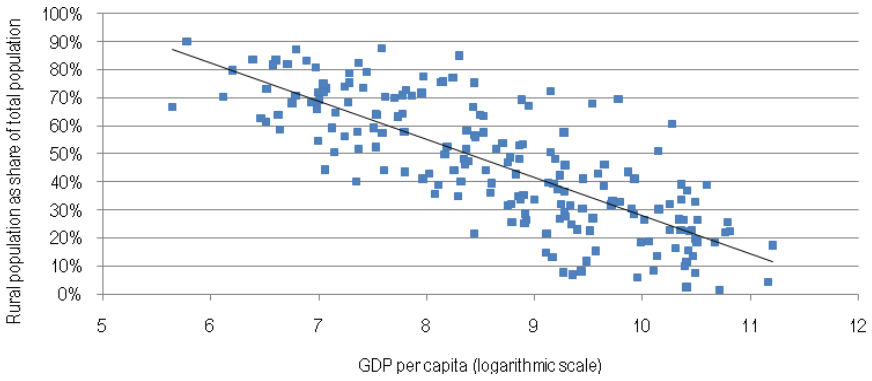
The reasons for agriculture's declining relative economic importance are well documented (for an overview, see Timmer, 1998). On the demand side, income elasticities of demand for food tend to be less than for other consumption so that the demand for food does not grow as fast as demand for other goods. On the supply side, total factor productivity typically rises faster in agriculture than in other sectors of the economy (Martin and Mitra, 2001). Moreover, technical innovation associated with agricultural productivity growth is labour saving, which has permitted the reduction of the share of labour devoted to production (Johnson, 2000). These combined developments permit the release of resources, especially labour, to other sectors. In absolute terms, the agricultural sector may nevertheless continue to expand. The pressure for farm resources to shift into other sectors may be lessened by the scope for increased exports in countries with a comparative advantage in agricultural activities, or reinforced by pressure from imports in the case of countries with a comparative disadvantage.

2.2. The spatial transformation

The spatial transformation from rural to predominantly urban economic activity is not as uniform as the sectoral transformation. Figure 5 shows that a majority of countries with a per capita income of less than USD 5 000 dollars (approximately 8.5 on the logarithmic scale) have more than 50 percent of their population in rural areas. On average, this share declines to 25 percent when countries reach an income of 20 000 dollars. Urbanisation may occur both as a result of higher birth rates in urban areas compared to

rural areas and as a result of rural-to-urban migration.[4] In China a majority (about 56 percent) of the population is still rural, but rapid migration from rural areas might soon change this situation. In 1983 the cumulative number of rural migrants was about 2 million in China. This number had increased to about 78 million in the year 2000. Six years later, in 2006, the estimated cumulative number of rural migrants was 132 million (OECD, 2009). In India, which has the largest rural population in the World (approximately 800 million), it is estimated that rural-to-urban migration accounts for about 30 percent of urbanization (Mitra and Murayama, 2008). In Brazil, rapid migration from rural areas increased the share of the population in urban areas from 15 percent in 1940 to 56 percent in 1970, and to more than 80 percent in 2000 (Wagner and Ward, 1980; Brazilian Demographic Census 2000).

Figure 5. Share of population that is rural and GDP per capita (190 countries)



Note: 190 countries; GDP per capita refers to 2005 PPP USD. *Source*: World Development Indicators, 2009.

The agglomeration of human activity with economic development may be inevitable, but the specific character of urbanisation is not. Rural areas may become more "urbanised" as a result of the agricultural transformation and the induced growth in non-farm activity. Alternatively, urbanisation may result from poor unskilled labour migrating to cities in the anticipation of improved prospects. In the absence of a parallel development in social infrastructure, the resulting shanty towns (common in Asia and Latin America) may impose severe social strains. Hence there is a need to plan for a sustainable form of urbanisation, which is likely to require the balanced promotion of farm and non-farm opportunities in rural areas.

2.3. The institutional transformation

A third dimension of change that developing countries tend to go through is the institutional transformation from an economy based largely on informal rules and procedures to one based on a framework of formal legislation – in short, the transformation from informal to formal institutions.[5] In the

[4] Rural areas may grow "urban" if they reach the population threshold that defines an urban area. Thus, the rate of urbanization depends to a certain degree on how urban and rural areas are defined. Usually, population agglomerations of 5 000 people constitute the lower threshold for what is officially defined as an urban area (Haggblade *et al.*, 2007).

[5] Institutions are understood here as the 'rules of the game' that shape and guide human behaviour (North, 1990). The distinction between formal and informal lies largely in the enforcement mechanism. While formal institutions are

absence of formal rules that effectively regulate employment, property ownership, or land use, various types of informal rules and procedures are usually applied instead. Two examples from the agrarian economy are sharecropping as a means to overcome moral hazard situations in the farmer-labourer relation and "squatter's rights", which regulate access to land.

The strengthening of formal institutions may facilitate the emergence of more commercially oriented agriculture, for example by supporting the development of land rental and credit markets, and other forms of formal contracts. It may also make the use of certain policy instruments more feasible, such as social safety nets. It is thus the third element of a three-pronged strategy for smallholder development, which involves facilitating the three dimensions of structural change: adjustment away from agriculture-dependence, a desirable form of urbanisation and concomitant institutional development. The specifics of this strategy are taken up in Section 4.

2.4. Where do countries stand in the transformation process?

Three-quarters of the world's dollar a day rural poor (nearly 600 million people) live in "transforming" economies, where poverty remains predominantly rural but agriculture contributes less than 20% to overall economic growth. In these countries the agricultural transformation is well underway but the spatial transformation has yet to work its way through. This has two important implications: First, it points to the need for a *rural* strategy as much as an agricultural one. Second, it underlines the importance of not generalising from the circumstances of a few agriculture-dependent economies. Thus for example, while Malawi's input subsidy programme has received much attention, it should be remembered that Malawi is an outlier in terms of agriculture's contribution to GDP (nearly 60%), and the extent to which its poverty is rural (nearly 90%). For the majority of countries, in which the agricultural transformation has already gained traction, agricultural growth seldom exceeds 5% per year, whereas in manufactures and services growth rates of 10% or more are common. Hence, for most of the world's poor, an appropriate development strategy has to focus on providing opportunities outside the farm sector at least as much as within it.

3. POLICY RESPONSES TO STRUCTURAL CHANGE

Smallholders in developing countries often underpin the rural economy yet they are rarely competitive on a commercial basis. Moreover they face systematic adjustment pressures as a necessary corollary of the development process. With technology improving, and more efficient use being made of scarce resources, including the exploitation of scale economies, smallholders that do not participate in sectoral cost improvements inevitably face pressures on their incomes. Faced with such pressures, governments have various options: they can shield smallholders from this pressure, or they can help them adapt to it – either by becoming more competitive, obtaining incomes from other sources, or by finding jobs outside the sector.

Governments' approach to smallholder adjustment has varied from one country to the next, but has been broadly related to the existing level of development. The nine emerging economies covered by OECD's Monitoring and Evaluation exercise – a group which includes three OECD members (Korea,

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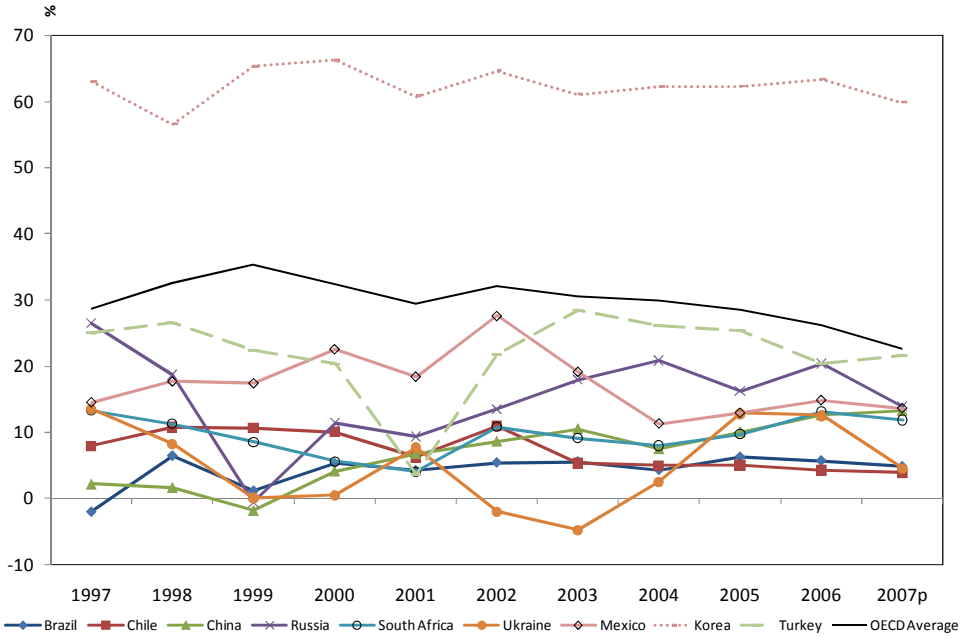
usually enforced by official entities (such as police, bureaucrats and courts), informal institutions are socially sanctioned norms of behaviour that rely primarily on self-enforcement mechanisms of obligation, expectations of reciprocity, and internalised norm adherence (de Soysa and Jütting, 2008).

Mexico and Turkey) and six non-members (Brazil, Chile, China, Russia, South Africa and Ukraine) – have all tended to protect their agricultural sectors. However, for all countries except Korea, producer support as measured by the PSE has been lower than the OECD average (Figure 6). The majority of support has been provided through market price support, which concentrates benefits among large producers when there is a spread of farm sizes and tends to put a brake on the process of adjustment rather than facilitate it.

However, some of these countries have also instituted significant programmes targeted at smallholders. For example, both Brazil and Chile have programmes that seek to integrate smallholders into the commercial sector, notably via the use of subsidised credit and investments in farm-level infrastructure. In few cases, however, have policymakers openly acknowledged that long-term competitiveness is not a realistic goal for the majority of smallholders and decided to focus their programmes on potentially viable operations. At the same time, there is no documented case of a smallholder programme in which the majority of farmers enrolling have succeeded in progressing through the programme to successfully join the ranks of efficient commercial producers. In other words, no programme has reversed the structural tendency for smallholders to leave the sector. This suggests that these policies constitute social policies at least as much as developmental ones.

Figure 6. Evolution of the producer support estimate in OECD and selected countries, 1997-2007

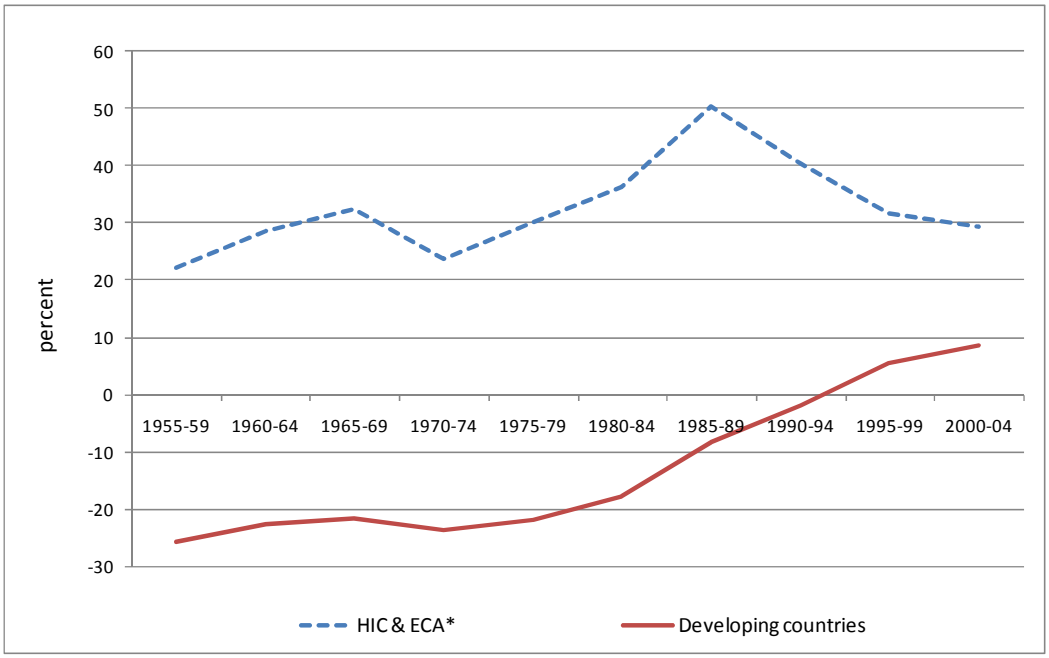


Source: OECD PSE/CSE Database (2008).

Low-income countries have historically tended to tax their agricultural sectors rather than subsidise them (Krueger, Schiff and Valdés, 1991). They have done this both directly, for example via export taxes and food subsidies, and indirectly, by investing relatively less in rural areas. Since the mid-1980s, there has been some reduction in this tendency, but it still prevails (Anderson *et al.,* 2008). As incomes rise and as agriculture's share of employment decreases, countries can afford more easily to provide support to their agricultural sectors (Figure 7). Whereas the total nominal rate of assistance (NRA), which measures the ratio of domestic farmgate prices to adjusted border prices, has fallen in high income countries since the mid 1980s, it has risen in developing countries. In the past ten years, developing countries have, on

average, started to subsidise their agricultural sectors rather than tax them. Some caution needs to be exercised in interpreting these numbers, as the NRAs are weighted averages for import-competing products, exportables and non-tradables, and in some cases different patterns can be observed when these categories are treated separately.

Figure 7. Nominal Rate of Assistance to agriculture in developed and developing countries, 1955-2004

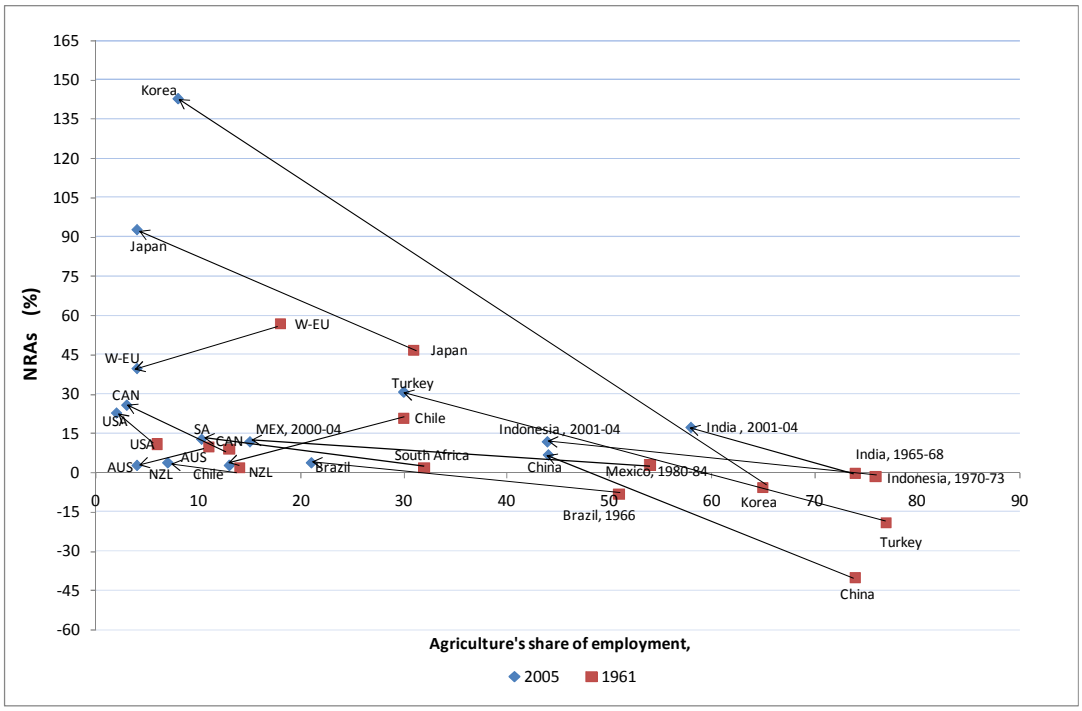


* HIC= High income countries; ECA=Eastern European and Central Asia countries.
Source: Anderson *et al.* (2008).

Figure 8 also helps to illustrate the connection between the level of protection and agriculture's share of employment. The horizontal axis shows agriculture's share of total employment, while the vertical axis measures the NRA. The arrows show the movement for each country between 1961 and 2005. For nearly all developing countries, the arrow points to the north-west, indicating an increasing rate of protection as labour leaves the sector, whereas the pattern for high income OECD countries is mixed.[6] The arrows are also much longer for developing countries, as more dramatic structural changes have taken place, and the associated change in protection has been larger. Interestingly, developing countries have undergone significant adjustment, seemingly irrespective of whether the rise in protection has been large or small.

[6] The tendency of countries to protect their agriculture as they become more developed stems from the political economy of structural change. On the demand side, as consumers spend a declining share of their incomes on food they become 'rationally ignorant' that they are paying elevated prices for their food – it is not worth the effort of becoming informed and protesting. On the supply side, the release of labour from the sector means that a given transfer to producers imposes a progressively smaller burden on the overall economy. Moreover, competitive pressures on less efficient farmers increase their incentive to lobby for government support.

Figure 8. NRA and agriculture's share of employment, 1961 and 2005, selected countries



Source: Anderson *et al*. (2008); FAO (1999); WDI (2008).

In low-income countries, declining dis-protection has been matched by commitments to allocate more resources to agricultural development. In such as context, it is important that monies are allocated wisely, and that the overall policy environment is conducive to agricultural development. This calls for a logical framework that acknowledges two important things. First, the long-term, *i.e.* inter-generational, future for the majority of smallholders cannot lie exclusively in farming; hence there is a need for policies that enhance households' opportunities outside the sector as well as within it. Second, in order to improve both agricultural competitiveness and the prospects for earning more outside the sector, the most important policies may not in fact be agricultural policies. It is therefore important that smallholder policies are framed in an economy-wide context, with agricultural policies a component of the overall policy mix. The elements of an appropriate strategy are set out in the next section.

4. A STRATEGIC FRAMEWORK FOR SMALLHOLDER DEVELOPMENT

4.1. Short-to-medium term policy considerations

In proposing a strategic framework for smallholder development it is helpful to make a distinction between the short to medium term issue of how best to support incomes, reduce poverty and tackle food insecurity (beyond immediate questions of humanitarian relief), and deeper long term questions regarding how best to promote economic development. There may be a connection, with programmes that are effective in the short term sowing the seeds for longer term development, but there may equally be trade-offs, so it is conceptually helpful to keep consider the issue of social policy separate from that of development policy.

The optimal way of addressing short term social objectives is with social policies. In countries with developed systems of social protection, agricultural policies are relatively poor at providing social protection. In the first place, a significant share of the benefits to farmers from agriculture-specific measures such as price supports and input subsidies "leaks" to unintended recipients such as providers of purchased inputs or non-farming landlords or is incurred as deadweight efficiency losses (OECD, 2003). Second, the use of such instruments typically has perverse distributional effects, with larger farmers benefiting more than smallholders. A third reason is that it is difficult to target such measures for both practical administrative and political economy reasons. For example, it is difficult to restrict price guarantees to smaller farmers without using a deficiency payment system (in which case other forms of social payment must surely be feasible), or to limit fertiliser subsidies to those who would not otherwise purchase fertiliser.

Across a range of developed and developing countries, population-wide social safety nets have proven relatively effective at supporting the incomes of rural households. In developing countries, conditional cash transfers (CCTs) have become particularly popular over the past decade. These programmes transfer cash to generally poor households on the condition that they make pre-specified investments in the human capital of their children. CCTs have been found to be effective at increasing consumption levels among the poor, and have led to behavioural changes, although their impact on *final* outcomes in health and education has been less clear (Fiszbein and Schady, 2009). This may be due to the need for CCTs to operate in conjunction with complementary investments (e.g. in schools and hospitals). An issue with CCTs is when the "conditional" element is warranted. For example, it may not be worth incurring the monitoring and enforcement costs associated with the condition that parents put their children in school if they would do that anyway.

In the poorest countries, however, it has been argued that the necessary institutions and infrastructure do not exist for cash-based instruments to be appropriate, and second-best arguments (i.e. those which necessitate market distortions) have been advanced to justify the use of agricultural policies such as price supports and input subsidies. For example, there may be no registry or information base by which to establish criteria of eligibility; remote farmers may not have a convenient way of spending cash; and – with weak institutions – such programmes may be particularly susceptible to corruption.

The case for systemic price support is weak. Aside from the standard shortcomings of such policies (described above), price support is particularly ineffective in agriculture-dependent economies, as amongst the poor there are both net buyers and net sellers of food, and many (perhaps the majority of) farm households may in fact be net buyers. However, the case for some form of price stabilisation is considerably stronger. The difficulties of designing price stabilisation programmes are well known. Formal (*ex ante*) price stabilisation induces moral hazard, with agents failing to mitigate risk, and price stabilisation can easily turn into systemic price support or suppression, depending on political pressures. Few, if any, price stabilisation programmes have proven to be financially sustainable. Yet in the short term there may be no other way of containing the impact of adverse price shocks on poverty and food security than by seeking to offset those impacts (for example by releasing/buying stocks, or by changing tariffs). Indeed, *ad hoc* (and *ex post*) intervention in genuinely extreme circumstances might be the best way of protecting incomes while limiting the disincentives for individuals to protect themselves against risk.

Input subsidies have also been suggested as a way (possibly the only way) of targeting the incomes of poor farmers, with the attraction (when markets are insulated) of lowering prices to consumers too. A host of difficulties of using input subsidies have been acknowledged. The inevitability of leakages to other agents in the supply chain, and the difficulties of targeting have already been noted. In addition such measures may crowd out the development of private input markets, may lead to the over-use of inputs, and once introduced have historically proven difficult to rescind. Nevertheless, there has been renewed optimism that a new generation of so-called "smart" subsidies, by virtue of innovative design features,

such as exit strategies, can deliver income benefits while limiting their known shortcomings (Dorward, 2009).

An additional (and sometimes dominant) argument that has been used for input subsidies, and to a lesser extent for price support, is that it acts as a bridge to longer term development, creating a surplus among farmers that can initiate the agricultural transformation. This argument, the key justification for the policy focus on smallholder development, starts from the premise that economic development has to start with improving the profitability of existing structures.

From a conceptual point of view, this argument needs to be kept separate from the short-term rationale for intervention. Over the longer term, policymakers need to consider *why* farmers are not competitive. This may be because of high transaction costs, for example due to poorly developed road systems, or market failures, such as the absence of functioning credit markets. The optimal policy solution would be to reduce transaction costs, vial suitable investments and thereby correct market failures directly – in other words, treat the causes of a lack of competitiveness rather than the symptoms.

However, such structural policies take time to pay-off, so direct support for smallholder development (with an emphasis on input subsidies) has similarly been advanced as a second-best alternative. In the case of the poorest of economies, this second-best component may be part of a much broader package of specific help to improve farmers' competitiveness. Ideally, long-term development policies should be able to discriminate between those who are potentially viable in the sector and those who are not, creating improved competitive conditions for the former and facilitating adjustment via diversification or exit for the latter. Generalised price support, or sector-wide input subsidies cannot do this. Indeed it runs the risk of impeding structural adjustment.

4.2. Long-term priorities

A long term strategy for smallholder development needs to acknowledge the inevitability of the sectoral, spatial and institutional transformations that accompany economic development. This calls for an integrated approach that smoothes adjustment across all three dimensions by: (i) enabling smallholders to become competitive or boost their incomes from other sources (diversification or exit); (ii) promoting a broader rural development strategy that does not focus exclusively on agricultural development, but seeks to create a more diversified rural economy; and (iii) strengthening institutions with a view to reducing the need for second best instruments.

Elements of such a strategy are set out in Table 2. Smallholder development here is understood to be the optimal path of adjustment to higher long-term income, be that improved competitiveness within the sector, income diversification (from agricultural or non-agricultural sources), or exit to other sectors. Adjustment pathways are described in the columns, and policy instruments in the rows. The first column (improving competitiveness within agriculture) applies to farm households only, but the other columns may apply to both farm households and salaried (often "landless") worker households. Note that the development pathways (columns) are not mutually exclusive: for example, one household member can enhance the farm's competitiveness while another provides off-farm income. Also, the instruments (rows) do not exhaust all possible policies, but focus on those with persuasive arguments.

Table 2. Strategic framework for smallholder development

	Development pathway				
	Help farmers become more competitive within agriculture	**Diversify income sources**		**Leave the sector for off farm work**	**Social protection for those unable to adjust**
Policy instrument		**Within agriculture**	**Outside agriculture**		
Price policies	Treats symptoms of uncompetitiveness rather than causes	May impede adjustment			Price stabilisation proposed as a 2nd best safety net
Input subsidies	Treats symptoms of uncompetitiveness rather than causes		May impede adjustment		Proposed as 2nd best instrument for the poorest countries
Credit policies	May correct market failures	Indirect impacts			
Investment in human capital	Minor effects of formal education for this generation; technical training more appropriate for productivity.	Can help farm family members and rural workers move into skilled jobs	Important for farm family members and rural workers	Important for managing inter-generation change	
Investment in infrastructure	Helps with market integration	Helps improve local job opportunities		Can ease migration decisions for offspring	
R&D and extension	Public and private sector important; gains from adoption and adaptive research.	Can expand agricultural employment			
Labour market reforms		Important for raising employment opportunities and wage incomes			
Cash transfers (possibly conditional)				Conditional school attendance may complement investments in schools	Preferred policy for those unable to adjust.
Regional policies	Important for improving market integration	Expanded non-farm activity would raise farm wages	Important for building a diversified rural economy with wider job opportunities		
Develop producer associations	Reduce transaction costs and help exploit economies of scale	Indirect impacts			
Land policies and property rights	Need to encourage rental markets and facilitate land purchases by small farmers			Secure property rights and rental markets can ease exit decisions	

Source: OECD.

Improving the competitiveness of farm households

In respect of farm households, it is important to have a realistic view of which farmers have the potential to succeed commercially within the sector. In some regions agro-ecological conditions may be such that farming may not be inherently commercially viable. More generally, the appropriate adjustment

pathway may depend on the basic type of farming system. For example, in East and Southern Africa the scope for agricultural growth in areas where a mixed maize and cash crop system dominates is inherently stronger than the potential in areas where rainfed sorghum and millet combine with pastoral agriculture (Dixon *et al*., 2001). Yet even when agro-ecological conditions are inherently favourable, the nature of structural change is such that farm operations tend to consolidate into fewer and more efficient enterprises, and some farmers will leave the sector.[7]

The main role for agricultural policy would appear to be in providing public goods that can improve competitiveness, but impose few distortions to incentives at the margin (such as investments in rural infrastructure, skills and training, and R&D).[8] Such investments are unlikely to crowd out the development of other activities and potential income streams, although they are likely to accelerate the shake-out between more and less competitive farmers. Most of the relevant expenditures would need to be made at the economy-wide or sectoral level rather than in the form of payments to individuals. A possible exception is when there are endemic market failures, for example in credit markets. Access to credit is important for smallholders, and private credit markets may find it not worth their while to engage with smallholders, simply because of their size and the difficulties of becoming informed about the creditworthiness of many small operations.

In many developing countries land rental markets function poorly or do not exist at all. The development of rental contracts can help compensate for market failures, provide flexible responses to economic and productive incentives, allow farmers to invest in farming capital, and help the poor and young gain access to land under conditions that are less demanding than those required to participate in land sales markets. Renting land may also be a first step to future land acquisition. The underdevelopment of rental markets may prevent the consolidation of land into more productive units, thus impeding agricultural investment and making it more difficult for uncompetitive farmers to diversify out of the sector.

Income diversification for farm households and salaried agricultural workers

Income diversification is essential for many farm households. For the poorest farm households, this is likely to provide some insurance and is in effect a "coping" strategy. For other farm households, having one or more family members draw income from outside agriculture may be the start of a successful move into more remunerative activities. Policies that support farm income alone, such as market price support, act as a disincentive for income diversification outside agriculture, providing a further argument against their use. The key policies required to help households diversify their income sources are again those that improve human capital. Regional development policies, including the development of rural infrastructure, may also have an important role.

[7] Poulton and Wiggins (2005) present some evidence of declining farm sizes in developing countries, mostly for countries where the average farm size is a hectare or less. This may represent a fragmentation of operations, for example due to inheritance laws and property rights systems, and is unlikely to be due to purported efficiencies of small farms (e.g. ease of labour supervision; local knowledge) outweighing the efficiencies of larger operations (knowledge of markets and technology; access to credit and inputs; ease of risk management; ability to assure quality).

[8] There is evidence to suggest that improvements in agricultural productivity have a strong effect in reducing poverty (Irz *et al.*, 2001). There is also evidence that agricultural growth has helped support broader economic growth (for example, Tiffin and Irz, 2006), although agriculture's role as a necessary driver of development has been questioned (Gardner and Tsakok, 2008).

Leaving the sector for skilled employment

Ultimately, the majority of smallholders in developing countries will have stronger prospects outside the agricultural sector than within it. The most important need, if not for this generation then for the next, would therefore appear to be investment in the education and skills that would enable households to obtain higher wages.

Regional development programmes may also have a role in bringing jobs to people (rather than the other way round) and so can prevent the problems associated with mass migration into cities. However, rural policies are not fundamentally agricultural policies (nor vice versa). Regional policies can boost development within and outside agriculture, but without biasing household decisions about how best to invest for the future.

In many middle income countries the conditions of salaried agricultural work are at least as important as the development of small scale farm entrepreneurs. In Chile, for example, two-thirds of all households receiving the majority of their income from agricultural sources are salaried workers, not farmers. Labour market policies have an important role in ensuring that core standards of employment are met, while improved labour market flexibility has been suggested as a way of reducing informality.

Social policies

Many poor households, notably older ones, face severe limitations in their adjustment potential, irrespective of the policies that are in place (for example, resource poor and post retirement age farmers). Hence there is always a need for social programmes. These policies can lift households out of poverty even if they cannot deliver "development". Investments in human capital (notably education) and measures such as contingent cash transfer can ensure that the next generation makes a quantum leap in terms of development.

5. CONCLUSIONS

This paper has pointed to the inevitability of structural change in the agricultural and rural economy, the consequent pressures for adjustment among smallholders, and the associated need for policies to facilitate rather than impede that process. A strategic framework has been proposed to assist policymakers in choosing the appropriate mix of policy instruments.

A key premise of that framework is that, for the majority of agriculture-dependent households, the long term (*i.e.* inter-generational) future lies outside the sector. Hence, policies need to make a distinction between those who potentially have a competitive future in the sector and those who do not. For both types of development path, many of the necessary policies will not be agriculture-specific, so it is important that agricultural policies are framed in a broader economy-wide framework.

Justifications for the use of agricultural market interventions (either in output or input markets) rely on second best arguments: they do not provide a theoretically optimal way of providing social protection (where social safety nets are to be preferred); nor, in the absence of market failure, are they the ideal way of fostering growth, since they treat the symptoms of a lack of development rather than its underlying causes. By contrast, the provision of public goods (including investment in agricultural research) is not just theoretically superior but of proven value.

Nevertheless, plausible reasons have been advanced for why, given weak institutions, high transactions costs and endemic market failures, some agriculture-specific interventions might be desirable. For such arguments to be properly substantiated, there needs to be a clear distinction between short-term imperatives related to incomes and poverty, and long term development goals, and a recognition that there

may be trade-offs as well as complementarities between the two. For example, input subsidies may have an immediate pro-poor impact but ultimately impede agricultural development.

The strategic framework presented in this paper seeks to help order an analysis of which types of policies are most appropriate for smallholder farmers and can contribute to faster progress on MDG1. A central conclusion is that it is the *policy mix* that matters, so empirical analyses of policy effectiveness need to take account of further possible complementarities and trade-offs between alternative agricultural and non-agricultural instruments. The former may include the complementarities between agricultural extension and the development of infrastructure and broader investments in human capital; the latter, the opportunity cost of using different expenditure mechanisms (e.g. providing input subsidies versus making longer term investments in rural roads or in non-agricultural areas such as health and education). A more formal analysis of these linkages is warranted.

REFERENCES

Abbot, P. (2009), "Development Dimensions of High Food Prices", Paper prepared for OECD.

Anderson, K., E. Jara, M. Kurzweil, D. Sandri and E. Valenzuela (2008), *Distortions to Agricultural Incentives: A Global Perspective, 1955 to 2007*, wWorking Paper. DECRG-TR, World Bank, Washington, DC.

Cervantes-Godoy, D. and J. Brooks (2008), "Smallholder Adjustment in Middle-Income Countries: Issues and Policy Responses", OECD Food, Agriculture and Fisheries Working Papers, No. 12, OECD, Paris.

Chen, S. and M. Ravallion (2008), "The developing world is poorer than we thought, but no less successful in the fight against poverty", Policy Research Working Paper Series 4703, The World Bank.

de Soysa, I. and J. Jütting (2007), "Informal Institutions and Development: How They Matter and What Makes Them Change", in J. Jütting, D. Drechsler, S. Bartsch, and I. de Soysa (Eds.), *Informal Institutions: How Social Norms Help or Hinder Development* (pp. 29–44). Paris: OECD Development Centre.

Dixon, J., A. Gulliver and D. Gibbon (2001), *Farming Systems and Poverty: Improving Farmers' Livelihoods in a Changing World*, FAO and World Bank, Rome and Washington DC.

Dorward, A. (2009). "Rethinking Agricultural Input Subsidies in a Changing World". Paper prepared for the Food and Agriculture Organisation of the United Nations.

FAO (1999), *Improving the Income of Farmers and Rural People*, Rome.

Fiszbein, A. and N. Schady (2009) *Conditional Cash Transfers: Reducing Present and Future Poverty*, World Bank Publications, Washington DC.

Gardner, B. and I. Tsakok (2007), "Agriculture in Economic Development: Primary Engine of Growth or Chicken and Egg?", *American Journal of Agricultural Economics,* 89(5), pp 1145-1151.

GDPRD (2009), *The Food Price Crisis and the Global Food Security Challenge*. Bonn: Global Donor Platform for Rural Development.

Haggblade, S., P. Hazell, and T. Reardon (2007), "Introduction", in S. Haggblade, P. Hazell, and T. Reardon (Eds.), *Transforming the Rural Nonfarm Economy: Opportunities and Threats in the Developing World* (pp. 3–24). Baltimore: The John Hopkins University Press.

IMF (2008), IFS International Financial Statistics Online, www.imfstatistics.org/imf/logon.aspx.

Irz, X., S. Wiggins and C. Thirtle (2001), "Agricultural Productivity Growth and Poverty Alleviation", *Development Policy Review*, 19, pp 449–466.

Ivanic, M. and W. Martin,(2008), "Implications of higher global food prices for poverty in low-income countries", Policy Research Working Paper Series 4594, The World Bank.

Johnson, D.G. (2000), "Population, Food and Knowledge", *American Economic Review*, 90(1), pp. 1-14.

Jonasson, E. (2009), *Labor Markets in Transformation: Case Studies of Latin America*, Lund Economic Studies, Number 155.

Kim, H. and Lee, Y.K. (2003), "Agricultural Policy Reform and Structural Adjustment: Historical Evidence from Korean Experience", Policy Reform and Adjustment Workshop, October 23-25, 2003, Imperial College London, Wye Campus.

Krueger, A.O., M. Schiff and A. Valdés (1991), *The Political Economy of Agricultural Pricing Policy,* Baltimore: Johns Hopkins University Press for the World Bank.

Martin, W. and D. Mitra (2001), "Productivity Growth in Agriculture and Manufacturing", *Economic Development and Cultural Change*, 49(2), pp. 403-23.

Mitra, A. and M. Murayama (2008), "Rural to Urban Migration: A District Level Analysis for India", IDE Discussion Paper No. 137. Institute of Developing Economies.

North, D. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.

OECD (2003), *Farm Household Income: Issues and Policy Responses*, OECD, Paris.

OECD (2008), *OECD Review of Agricultural Policies: Chile,* OECD, Paris.

OECD (2009), *Agricultural Policies in Emerging Economies*, OECD, Paris.

Poulton C. and S. Wiggins (2005), "The Future of Small Farms Achieving Pro-Poor Growth through Agriculture: the Challenges", Presentation at Overseas Development Institute, http://www.odi.org.uk/events/FutureAgricultures_2005/meeting_2dec/ifpri_files/frame.html.

Tiffin, R. and X. Irz (2006), "Is Agriculture the Engine of Growth?", *Agricultural Economics*, 35(1), pp 79-89.

Timmer, P.C. (1998), "The Agricultural Transformation", in Carl K. Eicher and John M. Staatz (ed.), *International Agricultural Development* (pp.113-135). Baltimore: Johns Hopkins University Press.

Wagner, F. E. and J. O. Ward (1980), "Urbanization and Migration in Brazil", *American Journal of Economics and Sociology*, 39(3), pp 249–259.

WDI (2008), World Bank Development Indicators, http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=6.

World Bank (2008), *World Development Report* 2008*: Agriculture for Development*, Washington DC.