

*Part 2*



*Increasing the participation of  
poor people in growth*



*As countries become more developed, governments can supplement the market incomes of the poor with public transfers*

This part unpacks the aggregate growth–inequality–poverty relationships in the case study countries and examines how the participation of poor people in growth was affected by country policies interacting with country conditions. A growing economy creates more jobs and better jobs, and poor households benefit from this growth when they have (or can get) jobs that offer rapidly rising earnings (World Bank 2004a; Fields and Pfeffermann 2003).<sup>1</sup> The focus here is on earnings from employment (wage and self-employment), because labor is the most abundant asset of poor households, providing between two-thirds and three-quarters of total income and even more for the poorest of families.

Earnings from agricultural activities dominate for poor households in low income countries, but as countries grow and become more urban, the importance of nonagricultural earnings rises. For example, 96 percent of the poor were engaged in agriculture in Burkina Faso (2003), but only 77 percent in Ghana (1999). Shifting from agriculture to nonagricultural employment was an important avenue for poorer households to benefit from growth. In Vietnam between 1993 and 1998 about 15 percent of the workers exited agriculture into informal nonagricultural employment, where earnings were higher.

As countries become more developed, governments can supplement the market incomes of the poor with public transfers, allowing poor households to benefit indirectly from growth through redistributive policies. But the country cases suggest that public transfers had a fairly minor role, given financial and administrative capacity constraints, and did not substantially affect poverty or the distribution of income (box 2.1). The exception: Brazil, the country with the highest GDP per capita in the sample and where transfers to rural areas contributed to reducing poverty and perhaps even income inequality. Although transfers may offer limited scope in affecting the disposable incomes of poor people at an aggregate level, they can be an effective part of a pro-poor growth strategy in a low income country, when used to facilitate risk management or asset accumulation.

Drawing often on the broader literature and the country cases, this part identifies what contributed to increasing agricultural and nonagricultural earnings among the 14 countries, and then analyzes how policies, interacting with country conditions, affected the ability of poor households to participate in growth.

### **Making agricultural activities more productive for poor households**

As the vast majority of poor people live in rural areas and draw their livelihoods from agriculture, the discussion starts with the factors that

### Box 2.1 Public transfers and pro-poor growth

In OECD countries income transfers provide a viable means of redistribution of income (Atkinson 2004). And among the 14 countries, transfers grew in the 1990s and evaluations suggest that they do improve the welfare of beneficiaries. But their scope in affecting overall poverty and inequality may be limited to larger middle income countries. The impact of public transfers on income inequality in several case study countries was negligible (box table). For example, in El Salvador between 1995 and 1999 transfers made up less than 2 percent of the incomes of the poorest rural households (Sanfeliu and Shi 2004).

**Box table. Impact of public transfers on the distribution of income (Gini index)**

	Burkina Faso	El Salvador	Ghana	Uganda	Vietnam	Zambia
Year	2003	2000	1998/99	1999/2000	1998	1998
After government transfers	0.45	0.53	0.40	0.402	0.35	0.54
Before government transfers	0.46	0.53	0.40	0.402	0.36	0.54

Source: Author calculations based on household surveys, various years.

In Brazil and Bangladesh spending on social transfers increased in the 1990s, raising the incomes and educational levels of beneficiaries. But only in Brazil did transfers (the rural pension) contribute to falling rural inequality in the 1990s. In Bangladesh social spending rose significantly in the 1990s, reaching 24 percent of the total budget and about 1 percent of GDP in 2001–02. Yet the impact of this spending was negligible at an aggregate level due to the small amounts, poor targeting and magnitude of poverty (Sen 2005). On the positive side, the conditional transfers, such as food-for-education, were found to be well-targeted and particularly successful in helping the poor smooth consumption during crisis periods and in providing incentives for children to attend school.

In Brazil spending on social programs reached 18 percent of the budget (1995–99). Data from Northeast and Southeast Brazil (the poorest and richest regions of the country respectively) suggest that 56 percent of the social spending in Brazil in 1997 was for pensions, which did contribute to lowering rural inequality levels, as they were provided to farmers as well as civil servants. The use of traditional cash transfers has also increased in Brazil, mainly to improve primary school completion rates by providing income subsidies to families with school-age children on the condition that each child attends school regularly. Bourguignon, Ferreira and Leite (2002), in assessing the poverty impact of Bolsa Escola, conclude that because of their small size, the transfers would reduce the incidence of poverty by only one or two percentage points, even if the program were perfectly targeted and covered the whole country.

affected agricultural earnings and the ability of poor households to benefit from these earnings. Agricultural growth was highest among the Asian countries in the sample, followed by the Latin American and then the Sub-Saharan African countries. Key factors affecting the overall rates of growth were productivity increases associated with access to improved technology, climatic influences and incentives for private investment; and factors affecting the value of production, such as agricultural price and trade policies, world prices and OECD subsidies.

**Poverty levels tend to be very responsive to agricultural growth**

In general, poverty levels tend to be very responsive to agricultural growth. Estimates from some of the countries suggest that agricultural growth accounted for between 40 and 70 percent of total poverty reduction, depending on the country.

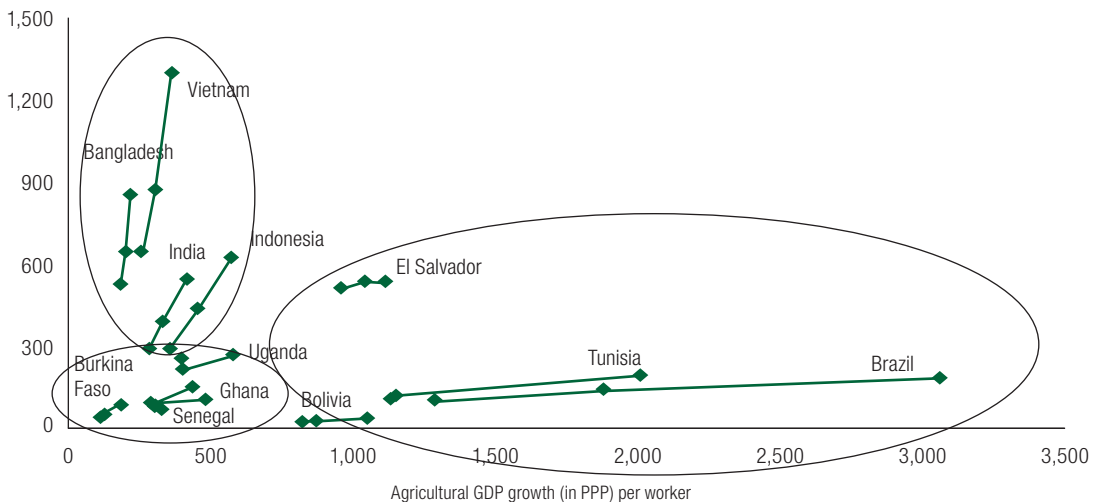
*Factors affecting growth of agricultural earnings*

The performance of the agricultural sector across the country cases varied greatly, reflecting different country conditions, policy frameworks and exogenous factors (climate, OECD subsidies, world price trends), as well as stages of structural transformation. Examining trends in land and labor productivity between 1980 and 2000, reveals three broad regional categories which form a useful framework to guide the discussion of the determinants of agricultural growth: the emerging low income countries of Asia, the upper low and middle income countries of Latin America and the smaller low income countries of Africa (figure 2.1).<sup>2</sup>

*Emerging low income countries of Asia* are undergoing wide structural transformation, generated by rapid growth in agricultural productivity, especially the productivity of land (Bangladesh, India, Indonesia and Vietnam). Public investments in agricultural research, as well as expanded access to rural irrigation and inputs were important drivers of productivity in Asia (Alston, Chan-Kang, Marra, Pardey and Wyatt 2002). For instance, in Bangladesh most of the incremental productiv-

**Figure 2.1 Trends in agriculture productivity reveal 3 country groups**

Average agricultural GDP growth (in PPP) per hectare, 1979–81, 1989–91, 1999–2001 (1990 U.S. dollars)



Source: Byerlee and Jackson 2005.

ity is related to the diffusion of modern rice technology, investments in irrigation (which covers 65 percent of the cropped area), investments in flood management infrastructure and increases in total fertilizer use (up 10 percent a year over the last three decades). In Vietnam land reform and trade and price liberalization also facilitated a structural shift into higher value crops and rising productivity and output. But in India and Indonesia continued subsidies and trade protection are considered to have reduced overall growth and diversification into higher value-added crops. In India these subsidies not only became a huge fiscal burden but they favored rice and wheat production and were a disincentive to diversify to higher value crop and livestock products. The result: agricultural growth slowed to 2.6 percent a year in the 1990s.

The *upper low and middle income countries of Latin America* (Bolivia, Brazil, and El Salvador) are diverse in their size and other aspects, but generally have higher labor productivity in agriculture, reflecting outmigration and investments by the large commercial sector, which owns much of the land. Small-scale farmers are often concentrated in marginal areas with low productivity and high poverty. In Bolivia and especially Brazil high outmigration contributed to rising productivity per worker. Agricultural employment in Brazil declined by about 1.4 percent a year during 1980–2000, compared with an average 1.2 percent increase for the other countries in the sample over these two decades.

The *smaller low income countries of Africa* are still in the early stages of the structural transformation, generally with low land and labor productivity (Burkina Faso, Ghana, Senegal, Uganda and Zambia).<sup>3</sup> Agricultural growth for them has been lower than for the Asian and Latin American countries. The median agricultural GDP growth for the five African countries in the 1990s was 0.28 percent a year per capita, compared with 1.28 percent for the four Asian countries and 0.45 percent for the three Latin American countries.

Constraining agricultural productivity growth in the African countries were limited technology for arid agriculture, low access to existing technology, often reflecting weak extension systems, and declining public investments in infrastructure. For example, Ghana spent only 2.5 percent of its total budget on agriculture, and Uganda only 1.5 percent, compared with Bangladesh's 12.2 percent. Poor incentives for private investment due to uncertainty over land tenure also affected production, particularly for smaller farmers. Given the significant participation of women in agricultural production in Africa, gender differences in security of tenure—and access to inputs and technology—are likely to account for much of the poor performance. Climatic forces were also important, underscored by the droughts that cut production in Senegal

*The smaller low income countries of Africa are still in the early stages of the structural transformation, generally with low land and labor productivity*

**Box 2.2 HIV/AIDS hits the labor force in Zambia and Uganda**

The main channel for HIV/AIDS to affect the economic development of a country is the labor force, with the epidemic reducing labor productivity and human capital accumulation. In Zambia the adult prevalence rate in 2003 is an estimated 16.5 percent, and the total deaths since the beginning of the epidemic are an estimated 17.9 percent of the total labor force in 2005. Lofgren, Thurlow and Robinson (2004) measure the overall impact of HIV/AIDS on Zambia’s economy and find that it reduces annual GDP by up to one percentage point. An International Labor Organization study estimates the loss in GDP per capita growth attributable to HIV/AIDS at 0.4 percent a year for 1992–2002.

Uganda, by contrast, has been one of the few countries to reduce the prevalence of HIV/AIDS—from around 30 percent in the early 1990s to 4.1 percent in 2003. But it is among African countries with the largest number of losses from the epidemic: 10.4 percent of the labor force in 2005.

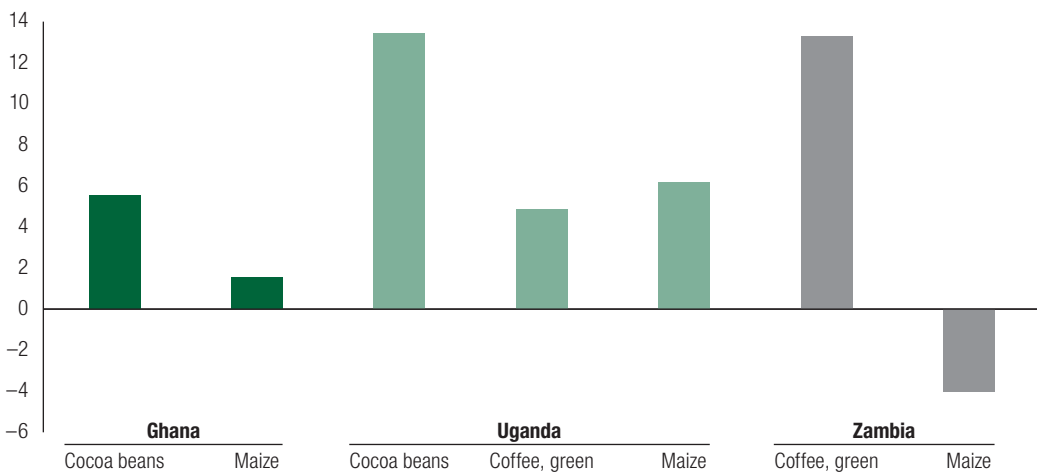
*Source:* International Labour Organization 2004.

and Burkina Faso in 1998. HIV/AIDS also hit productivity and overall output by reducing the size and quality of the labor force, particularly in Uganda and Zambia (box 2.2).

Agricultural export production, particularly in the mid-1990s, expanded significantly in Africa, responding to macro and structural reforms, though exports remained a small share of total output (figures 2.2 and 2.3). Exchange rate reforms, the removal of export taxes, the privatization of marketing boards for cash crops and the alignment of producer prices substantially improved the incentives for traditional

**Figure 2.2 Production of cash crops rising in three African countries—food crops declining**

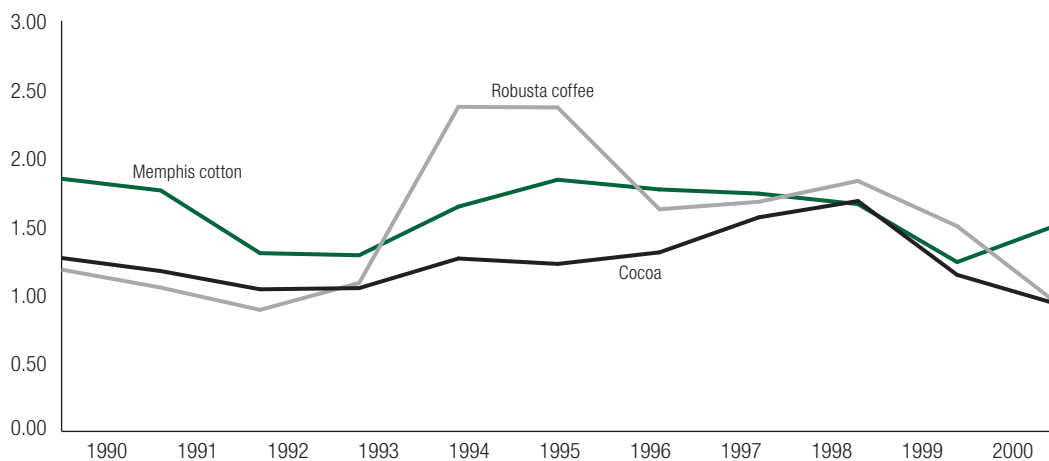
Average annual growth of production, 1990–2001 (%)



*Source:* FAO agricultural production database.

**Figure 2.3 Cocoa, coffee and cotton prices up, then down**

Price per kilogram (1990 U.S. dollars)



Source: World Bank staff.

export crops in the region in the 1990s. Uganda dismantled coffee, tea and cotton marketing boards, and the farmgate price for coffee increased from less than 30 percent of the total to more than 80 percent. In Ghana the devaluation and the reduction in export taxes on cocoa stimulated a large increase in production in the 1990s. In Burkina Faso cotton exports expanded by 250 percent from 1994 to 2003 in response to the 1994 CFA franc devaluation. In Zambia devaluation and liberalization led to a major expansion in cotton exports. The impacts could have been even larger if OECD countries had not subsidized their cotton exports. For example, Minot (2002) estimates that a 40 percent decline in cotton prices increased poverty in Benin by 6–8 percent, and this is likely to be broadly representative of Burkina Faso too.

### *Agricultural growth and poverty reduction*

Growth in agriculture has been strongly tied to poverty reduction in the literature, given the typical concentration of poor households in rural areas and agriculture and the strong links between agricultural growth and nonagricultural growth (box 2.3).

Most of the poverty reduction occurred among households engaged primarily (although not exclusively) in agriculture, despite the fact that the sector generally only contributed between 10 and 30 percent of GDP and experienced lower rates of growth than nonagricultural sectors (except for Brazil and Ghana). In Indonesia between 1984 and 1996—a period of rapid growth outside agriculture (including manu-

### Box 2.3 Agricultural growth reduces poverty

Why is agricultural development good for growth and poverty reduction? First, the vast majority of the poor generally resides in rural areas and depends directly or indirectly on agriculture for its livelihoods (Klasen 2004 and Thirtle, Lin, and Piesse 2003). Second, agricultural growth increases rural demand for nonagricultural products that tend to have high labor-capital ratios, creating a virtuous circle of growth and poverty reduction (Mellor 2000 and Hazell and Haggblade 1993). Third, agricultural growth in a closed economy leads to lower food prices, which can improve nutritional outcomes, raise the incomes of urban and rural food buyers, and be good for growth by moderating wage increases and inflation (Timmer 2003). Fourth, volatile agricultural production can also lead to macro instability, undermining both growth and poverty reduction (Timmer 2004).

Since the mid-1980s, however, the importance of agriculture for poverty reduction has been questioned, given the rising share of nonagricultural sectors in GDP, stagnant agricultural productivity in many low income countries (reflecting difficulties in developing technologies suitable for difficult agro-climatic conditions) and a more open global trading environment (along with OECD country subsidies) undermining the terms of trade for basic foodcrops produced by many developing countries.

What is the empirical evidence? The Green Revolution in Asia provided strong empirical evidence of the ability of agriculture to lift enormous numbers of people out of poverty and stimulate broad economic development (Rosegrant and Hazell 2000). It has been shown that agricultural growth has been more pro-poor than industrial growth in India (Datt and Ravallion 2002) and in Indonesia (Thorbecke and Jung 1996). Using data from a broad sample of developing countries in the early 1970s and mid 1980s, Bourguignon and Morrisson (1998) find that increasing agricultural productivity is the most efficient path for many countries to reduce poverty and inequality.

For China primary sector growth has about four times the impact on poverty reduction as secondary or tertiary sector growth (Ravallion and Chen 2004). The pattern of growth also influenced the evolution of inequality. Rural and especially agricultural growth reduced inequality not only in rural areas but also between rural and urban areas. Land reform and decollectivization, along with reforms of the procurement system, were the main drivers of the high rates of agricultural growth in the 1980s.

factured exports)—the direct and indirect effects of agriculture contributed 66 percent of the overall poverty reduction. More than half the reduction was in urban areas and three quarters in rural areas (Sumarto, Suryahadi, and Arifianto 2004). In Vietnam, 71 percent of the workers who exited poverty either remained primarily employed in agriculture or moved into agriculture between 1993 and 1998, when per capita agricultural growth was 2 percent a year (Bernabè and Krstić 2005). In India, output growth in the primary and tertiary sectors did much to reduce poverty in both urban and rural areas for the extended period 1957–1991 (Ravallion and Datt 1996).<sup>4</sup>

Agricultural growth had the greatest impact when it was generated by the crops most cultivated by the poor. In the Sub-Saharan countries most of the agricultural growth was in export agriculture, but food-crop producers accounted for the greatest share of poverty reduction.

**Table 2.1 Decomposing poverty reduction in Ghana and Uganda by sector of activity**

	Uganda (1992–2003)				Ghana (1991/92–1998/99)		
	Percentage				Percentage		
	Population share (1992) (%)	point change in poverty	Share of poverty reduction (%)		Population share (1991) (%)	point change in poverty	Share of poverty reduction (%)
Crop agriculture	66.6	13.2	48.9	Foodcrop farmers	43.6	8.6	30.6
Export agriculture	5	18.8	5.3	Export farmers	6.3	25.4	13
Mining/construction	1.5	13.5	1.1	Private informal employ.	3.1	13.3	3.3
Manufacturing	4	16	3.5	Public sector employment	13.5	12	13.2
Trade	7.4	9.1	3.7	Private formal employ.	3.9	19	6.1
Transport/Comm.	1.7	16.2	1.5	Nonfarm self-employ.	27.6	9.8	22
Government services	8.1	24.2	10.8	Not working	2	1.6	–0.2
Other services	2.6	5.4	0.8				
Not working	3.3	26.7	4.9				
Total intra-sectoral effect			80.4	Total intra-group effect			88.0
Total migration effect			20.9	Total migration effect			10.6
Residual			–1.2	Residual			1.4

Source: Okidi, Ssewanyana, Bategeka, and Muhumuza (2005) and Aryeetey and McKay (2004).

Note: These estimates do not include the indirect impact of agricultural growth on lower food prices and higher nonfarm growth. Nor do they reflect the contribution of other sources of income to agricultural households (such as remittances or nonfarm income).

In Uganda export agriculture accounted for 5 percent of the poverty reduction between 1992 and 2003, much less than the 49 percent for foodcrop production, even though the incidence of poverty fell more for export farmers (table 2.1). In Ghana export farmers contributed only 1.3 percent to the poverty reduction, compared with 31 percent for foodcrop farmers, but the percentage point decline in the poverty rate was about three times that of foodcrop farmers.

### *How did poor households participate in agricultural growth?*

Bangladesh and Uganda offer sharply different experiences in the way poor rural households participated in growth by increasing agricultural earnings. Agricultural growth was relatively strong in Bangladesh in the 1990s (GDP per capita grew annually by 1.9 percent) and rising farm and nonfarm earnings helped rural poverty fall from 53 to 44 percent (1992–2000). In the early 1990s the government liberalized the import of agricultural inputs, which helped small-scale farmers purchase reasonably priced private irrigation. Improved access to irrigation also facilitated the adoption of modern high-yielding crop varieties and fertilizer by poorer farmers (who had previously avoided Green Revolution

*Across the 14 countries in the study, five policy interventions were important in helping raise the agricultural earnings of poor households in the 1990s*

technology, which was more subject to climatic variation). As yields rose, poorer farmers shifted toward fixed-rent tenancy from sharecropping to maximize their returns, though regulations continued to limit land rental markets. Following the policy reforms, rural markets expanded significantly, given low transaction costs, helped by road investments that connected 1,400 of the 2,100 markets and by high population density (1,000 people per square kilometer). Rising remittances helped farmers invest in agriculture (although access to microfinance remains relatively high in Bangladesh, it was generally used for nonfarm activities). The government also invested in flood infrastructure, which benefited all farmers, and introduced safety nets during the flood and post-flood months.

Uganda's agricultural growth, similar to Bangladesh's at 1.6 percent per capita a year, also led to significant reductions in rural poverty, but the rate slowed more recently. Rising agricultural earnings were heavily influenced by coffee sector reforms and rising world prices in the mid-1990s. While poorer farmers did benefit from coffee exports in the mid-1990s, they faced particular difficulties in increasing food-crop yields and their agricultural earnings, particularly after the fall in coffee prices. Extension services raised productivity, but agricultural households in the top quintile were twice as likely to receive them as those in the bottom quintile. Unlike Bangladesh, the liberalization of input markets did not increase input use, because input markets remain fragmented and thin, particularly in more remote regions, where poorer farmers are concentrated and the road network is weak. Similarly, microfinance services were limited, biased toward the richer farmer households and nonagricultural activities and not offering the long-term financing necessary for agriculture. Land markets, though effective in transferring land to poorer farmers, remained informal and ownership and use rights unclear, constraining investment incentives. And despite the fact that women account for the largest share of agricultural production, they owned only 5 percent of the land, had much lower access to inputs and technologies and little control over the proceeds (particularly cash proceeds), reducing their ability to invest in cash crops (World Bank 2005d). Ugandan women had one of the world's highest fertility rates (6.2 births per woman in 2000), generating a large time burden for them, detracting from their labor in agriculture (and nonagriculture).

Bangladesh and Uganda typify some of the policies and constraints that affected agricultural earnings for poor farmers in the 1990s, showing that similar policy interventions did not always have the same effect on poor households, given differences in policy packages, country

conditions and exogenous factors. Across the 14 countries in the study, five policy interventions were important in helping raise the agricultural earnings of poor households in the 1990s: improving market access and lowering transaction costs, strengthening property rights for land, creating an incentive framework that benefits all farmers, expanding the technology available to smallholders and helping poorer and small producers cope with risk.

*Improving market access and lowering transaction costs.* Improving market access and lowering transaction costs help create market opportunities and link remote producers to growth (Dorward, Kydd, Morrison, and Urey 2004; Timmer 2004; and Thirtle, Lin, and Piesse 2003). Christiaensen, Demery, and Paternostro (2003) highlight how remote regions in Africa have been left behind when growth has increased and how infrastructure (especially roads) helps connect these regions to growth. In Indonesia, Bangladesh and parts of Vietnam improving market access was essential in increasing agricultural earnings for smaller and poor farmers. But for the Sub-Saharan countries, the lack of market access was a critical constraint, perhaps even binding.

What provided market access for poorer farmers in Indonesia, Bangladesh and Vietnam? Significant and sustained investments in rural road infrastructure and marketplaces (often implemented under food-for-work programs), high population densities and the fact that smallholder export and foodcrops were often the same (as for rice). In Indonesia investments in rural development and infrastructure were a central priority for poverty reduction and political stability. According to Timmer (2005, p. 8), “the ‘road to pro-poor growth’ started from desperately poor economic conditions, weak institutions and a decade of political instability. It seemed that everything needed to be done at once. The key was to restart and then sustain rapid economic growth, empowering poor households to enter the market economy and reducing the costs and risks of doing so by lowering transaction costs. The strategy worked for three decades.”

But how did Indonesia do this? Benefiting from the oil revenues in the mid-1970s and later from fairly high rates of growth, the government made massive rural investments (in roads, communications networks, market infrastructure, ports, irrigation and water systems) and introduced regulatory reforms that transformed the capacity of farmers to move goods around the country and to urban markets. Many of the investments were labor-intensive public works, making many jobs available to unskilled workers willing to work at local market wages. Between 1970 and 1998 roads (in kilometers) increased by 8.3 percent

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***For Bangladesh, Indonesia and Vietnam, the development of physical infrastructure was a major element in the rural development strategy***

a year, while the number of trucks registered grew by 16.5 percent a year.

Similarly for Bangladesh and Vietnam, the development of physical infrastructure (roads, bridges, culverts and marketplaces) was a major element in the rural development strategy. In Bangladesh this deepened the vibrancy of the rural economy for both agriculture and nonagriculture, and microsurvey data suggest that the number of small and medium market centers more than doubled between 1994 and 2000 in rural areas (Sen and Hulme 2004). But in the more remote and poorer regions of Vietnam, India and Indonesia, high transaction costs continue to constrain agricultural earnings.

Among the five low income African countries, high transaction costs and limited market access, reflecting low population densities and poor access to infrastructure, were among the most important constraints on expanding agricultural earnings, especially for smallholders in remote areas. In Burkina Faso and Zambia, the road density (in kilometers of roads per square kilometer) is 5–7 percent of that in India in 1999. Diao, Hazell, Resnick, and Thurlow (2005) calculate that African coffee producers receive a farmgate price that is 30 percent lower than that for Vietnamese farmers, who dramatically expanded their share in world markets in the 1990s.

Because of poor market access almost two-thirds of African farmers are effectively isolated from national and world markets. It is estimated that some 60 percent of the rural population in Africa lives in areas of good agricultural potential but poor market access, while only 23 percent live in areas of good agricultural potential and good market access (table 2.2). The remaining 18 percent live in the most difficult environments, with poor agricultural potential and poor market access.

In many cases limited national or even international demand may leave African producers of basic crops with no market to sell their out-

**Table 2.2 Many agricultural producers in Sub-Saharan Africa lack market access, even in areas of good potential**

	Low agricultural potential (percent)	Medium to high agricultural potential (percent)	Total (percent)
Poor market access	18	60	78
Medium/good market access	0	23	23
Total	18	83	101

Source: Kelley and Byerlee 2004.

**Table 2.3 In Zambia expansion into cash crops was mainly by medium-scale farmers**

	Small-scale farmers		Medium-scale farmers	
	1991	1998	1991	1998
Foodcrops	77.6	40.9	75.2	18.7
Cash crops	3.8	5.9	4.3	60.2
Livestock	3.8	6.2	8.7	4.0
Nonfarm business	1.5	24.2	1.2	11.1
Wages	12.7	11.0	9.6	3.1
Other	1.9	11.9	1.0	2.9
Total	101.3	100.1	100.0	100.0

Source: Thurlow and Wobst 2004.

put. In Burkina Faso moderate growth in foodcrop production in the 1990s did not substantially increase rural earnings because of low marketability. Producers faced very low domestic demand given the small urban population (with declining real incomes) and low external demand for their basic foodcrop (millet), effectively nontradable.

High transaction costs have been a particular barrier for foodcrop farmers in remote areas. In many African countries the withdrawal of state support from foodcrop production has often not been covered by private investment, given the low population density, poor infrastructure network and shallow rural markets. In Zambia before the 1991 reforms, maize farmers received marketing supports and were provided with fertilizer and other inputs. After the reforms the private sector stepped in to support regions closer to transportation networks and the copper belt to continue to grow maize and to support an expansion into nontraditional exports (Saasa 2003). As a result, expansion into cash crops was confined mainly to medium-scale farmers with reasonable market (rail) access (table 2.3). The share of medium-scale farmers involved in cash crops rose from 4 percent in 1991 to 60 percent in 1998, while the share of small-scale farmers rose from about 4 percent to 6 percent.

Food markets in Africa are expected to be the fastest growing of all agricultural markets on the continent over the next 20 years (Commission for Africa 2005). Moving forward, it will be important to link rural farmers to local and regional markets with better infrastructure and marketing associations so that they can benefit from this greater demand. Contract farming with NGOs and the private sector has been successful in several of the African countries in facilitating market access, particularly when complemented by organized involvement at the grassroots level.

***Strengthening  
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growth***

*Strengthening property rights for land.* Strengthening property rights for land is critical for pro-poor agricultural growth. Security of tenure gives farm households incentives to invest and raise productivity—it can also facilitate out-migration. The case studies highlight access and tenure security as helping rural households connect to growth. So does other research: analysis of 11 countries in Latin America with highly unequal income and (especially) land ownership suggests that agricultural growth did little or nothing to reduce absolute poverty (De Janvry and Sadoulet 1995).

Land reforms and land markets have increased tenure security and promoted access by smallholders to land. Strengthening property rights for land improved incentives to increase production and diversify into higher value crops in Vietnam. In 1988 land was decollectivized and under the 1993 Land Law, use certificates were issued to all rural households, stimulating the intensification and diversification of agricultural production into higher value crops. Market-driven changes in land tenancy arrangements in the high-growth Asian countries also helped guarantee rural property rights and enhance investment incentives, particularly for poorer farmers. In Bangladesh, changes in the structure of tenurial arrangements increased the share of land under fixed rental arrangements, which offer poor tenants more incentives to invest and raise their productivity. The land under share tenancy declined gradually from about 91 percent of tenanted area in 1960 to about 62 percent in 1996, while the area under fixed rent and other arrangements increased from about 26 percent to 38 percent between 1983 and 1996. But in Bangladesh and India, continued restrictions on land rental markets make it difficult and costly for smaller farmers (particularly women and landless) to rent land. Almost 20 percent of the rural population is landless in Bangladesh, less than 3 percent in Vietnam. In Indonesia land rights remain poorly defined at the local level, particularly for forest land (land records cover only 20 percent of the land in Indonesia). Opaque and costly systems of land administration and allocation in rural Indonesia constitute serious obstacles to expanding agricultural earnings, particularly for poorer farmers (Deininger and Zakout 2004).

For the farmers in the African case studies, clarity of tenure and transparency of land markets were important constraints. The weakness of land market institutions (Uganda, Burkina Faso), the lack of full transparency in local land management (Zambia) and difficulties facing non-community members in gaining access to land in Ghana constrained the ability of all farmers, but particularly poorer ones, to invest. The co-existence of customary land management systems with formal land

arrangements can reduce the clarity and increase the difficulty in implementing formal law. In many countries of Africa, improving land tenure security for poorer farmers will involve developing formal systems that strengthen and complement customary land practices. Lack of tenure security, particularly for inheritance-related transfers, especially affected poor rural women, the primary producers of foodcrops.

For Ghana, Aryeteey and McKay (2004, p. 47) write, “[T]here is general agreement that the land tenure and administration systems face serious problems, which have exacerbated land tenure insecurity with implications for national development. These problems include the general indiscipline in the land markets, indeterminate boundaries of customarily held lands, a weak land administration system, the problematic articulation of statutory and customary land tenure systems and confusion over the status of derived interested and customary tenancies.” They conclude that the consequence of this poor land administration is that “agricultural investment is less than 2 percent of GDP and less than 2 percent of arable land is under irrigation. Acquiring land for commercial farming is extremely difficult, hence the difficulty in raising capital for the sector.”

In Zambia too, land tenure policies affect smallholder access to land. Land allocation was centrally controlled, with tenure restricted to a few large-scale and commercial farmers (Saasa 2003). More recently there have been attempts to decentralize the land tenure system, with control moving to local governments and customary leaders, though this is not yet complete. The government decides on most land allocations, and many smallholders do not own the land they work, which makes it hard for them to get credit (Thurlow and Wobst 2004). In Uganda the 1988 Land Act has yet to be fully operationalized given the costs associated with the new procedures and institutions. Yet it rendered illegal the traditional channels for resolving land conflicts (court(s) of elders, village councils). So the women and tenants protected under the new law remain without secure tenure, the ability to use land as collateral is limited and the resolution of land disputes is difficult (Okidi, Ssewanyana, Bategeka, and Muhumuza 2005).

Given the importance of women in agricultural production, insecure tenure has been a particular problem for female producers in African countries. This insecurity and their inability to claim equal access to land and other inputs has held back investments in land and crop improvements and thus growth and poverty reduction (Blackden and Bhanu 1999 and Klasen 2005b).

In Tunisia, El Salvador, Bolivia and Brazil high levels of land concentration lower the agricultural growth elasticity of poverty. In Bolivia

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*Trade liberalization, along with land reforms, promoted the rapid emergence of Vietnam as a major world exporter of rice and coffee*

and Brazil the land Ginis in the 1980s hovered around 0.80, compared with 0.59 for India in 1985 (World Bank staff data). In Brazil only one-third of the total area available has been used by family farms, which employ 77 percent of the rural labor force (World Bank 2003). Efforts to increase land access have been only partly successful, given administrative issues and lack of complementary investments. El Salvador had a major land reform in the early 1980s and another in 1992, as part of the Peace Accords. These reforms corrected the sharpest inequalities in the distribution of assets but led “to legal insecurity of land holdings, low investment levels, the emergence of arrears and arrears clearance initiatives, and low managerial levels in the exploitation of land transferred to cooperatives” (World Bank 1997, p. 5). In Brazil and Bolivia land reform may not be politically viable, but expanding the access of smallholders and poorer farmers to long-term financing, and in some cases to grants for land purchases, have been successful.

Access to land remains an issue in Tunisia, where more than two-thirds of the farmers owned about 10 percent of the land in 1991, while 1.2 percent of the richest farmers owned more than 22 percent. In addition, the state still holds large farms, some leased to private farmers on a long-term basis, with the poor generally excluded. Ayadi, Boulila, Lahouel, and Montigny (2004, p. 27) conclude that in Tunisia “the rural poor have remained with very little land endowments for which property titles are not even secured in most cases.”

*Creating an incentive framework that benefits all farmers.* Creating an incentive framework that benefits all farmers was an important part of the structural reforms by the African countries, Bangladesh, Vietnam and Romania. The impact on agricultural producers depended on the size of their production unit, the crops they grow, and their access to capital, technical assistance and markets. Trade liberalization, along with the land reforms, promoted the rapid emergence of Vietnam as a major world exporter of rice and coffee in the 1990s, to the significant benefit of smallholders. In Bangladesh, trade liberalization facilitated imports of low-cost inputs, increasing their use by poor farmers.

In Africa foodcrop farmers generally benefited less than export crop farmers, for whom poverty rates fell sharply. But with the exception of coffee producers in Uganda, export farmers tended to make up a fairly small share of the total and were mainly the better-off (by the end of the 1990s only 20 percent of Burkinabe producers grew cotton). Trade and price reforms increased efficiency and provided attractive incentives for private involvement in export crops. But the private sector did not step in to fill the void in foodcrop marketing (as it did for export crops), leav-

ing many poorer foodcrop producers in remote areas of Africa without market access.

In India and Indonesia agricultural subsidies and trade protection continued to redirect significant public resources and production incentives away from higher value production and more labor intensive crops. India continues to spend significant resources subsidizing basic grains, fertilizer and electricity, disproportionately favoring the larger farmers and diverting public resources from more productive uses (box 2.4). Thirty-five percent of the farmers have farms under two hectares (9 percent of the land area) but receive only 7.5 percent of the fertilizer subsidy, 5.5 percent of the electricity subsidy and 5 percent of the canal water subsidy. These subsidies undermine employment opportunities for poorer rural households as they act as a disincentive to diversify into higher value and more labor intensive crop and livestock products. Keefer and Khemani (2004) argue that the continuing subsidies in India reflect the inability of political competitors to make credible offers to deliver high-quality public goods, while giving tangible support to voters.

In Indonesia, as in India, intervention in agricultural markets disproportionately benefits the larger (rice) farmers and prevents diversification into higher value and more labor-intensive crops. Tariffs protect the incomes of rice farmers, who make up a large proportion of the rural poor, but they also tax consumers. Every 10 percentage point increase in the import tariff on rice pushes an additional one million Indonesians below the poverty line (the growth elasticity of poverty is significantly and negatively related to trends in rice prices). The tariff also reduces economic efficiency, since it undermines incentives to diversify and ex-

#### **Box 2.4 Agricultural subsidies in India—who benefits and at what cost?**

Agricultural output subsidies swallowed about 20 percent of India's federal revenues. Most of the subsidies for rice and wheat have gone to the nonpoor, doing little even to reduce child malnutrition (Jha and Srinivasan 2001). For example, a reduction in the subsidy in Andhra Pradesh had no effect on the nutritional status of children (Tarozzi 2003).

The implicit electricity subsidies to agricultural consumers by state utilities is regarded as the single largest threat to the fiscal and financial stability of state governments in India (Keefer and Khemani 2004). Benefit incidence analysis shows that most of the electricity subsidies are captured by medium and large-scale farmers who own and use electrically operation irrigation pump sets (Howes and Murgai 2003).

Similarly, the cost of fertilizer subsidies has risen to 0.7 percent of GDP, but little of the subsidy benefits farmers. Most gains go to fertilizer manufacturers (Panagariya 2002).

*Note:* This box was prepared using material drawn from Keefer and Khemani 2004.

*Investments in flood infrastructure and flood-season safety nets for poorer farmers reduced risk and created incentives for diversification in Bangladesh*

exploit opportunities in high value products. The trade protection has its roots in the political economy: rice farmers are the single most important voting block.

In reforming agriculture in India and Indonesia it will be important to consider the transition costs to small-scale farmers. While they may receive only a small share of the subsidies, they make up a significant share of their total income.

*Expanding the technology available to smallholder producers.* Expanding the technology available to smallholder producers was a critical driver of the Green Revolution, lifting agricultural earnings in Asia. In Indonesia technology combined with massive investments in agriculture produced high rates of pro-poor growth in the 1960s, 1970s and 1980s. In Bangladesh access to low-cost irrigation equipment, liberalizing the fertilizer trade and increasing access to remittances facilitated purchases of agricultural inputs. But in the Sub-Saharan countries the lack of adequate technologies for arid climates and weak extension services constrained producers, particularly in foodcrops, where the poor are concentrated. Expanding financial support to regional research institutions and improving the delivery of extension services to poor farmers and women in conjunction with private firms and NGO providers could increase agricultural earnings for poorer farmers in Sub-Saharan Africa.

*Helping poorer and smaller producers deal with risk.* Helping poorer and smaller producers deal with risk has stimulated the adoption of higher yielding agricultural techniques. Investments in flood infrastructure and flood-season safety nets for poorer farmers reduced risk and created incentives for diversification in Bangladesh (along with increased access to private irrigation). Information and communication technologies can also provide smallholders with market information (mobile phones in Uganda), helping them to better manage price fluctuations. Improving access to market storage facilities can smooth seasonal fluctuations (Burkina Faso). In general, expanding the use of targeted safety net programs where administrative capacity exists or can be reinforced would help avoid severe deprivation from output and price variations—and encourage farmers to adopt riskier technologies that offer higher returns.

**Helping poor households take advantage of nonagricultural and urban employment opportunities**

Nonagricultural employment became more important in the 1990s, particularly in countries experiencing rapid growth, as its share of total employment expanded and earnings rose quickly in line with growth.

Understanding how policies and country conditions affect the ability of poor workers to increase their nonagricultural earnings is a critical concern for policymakers interested in accelerating the participation of the poor in growth.

#### *Factors affecting the growth of nonagricultural earnings*

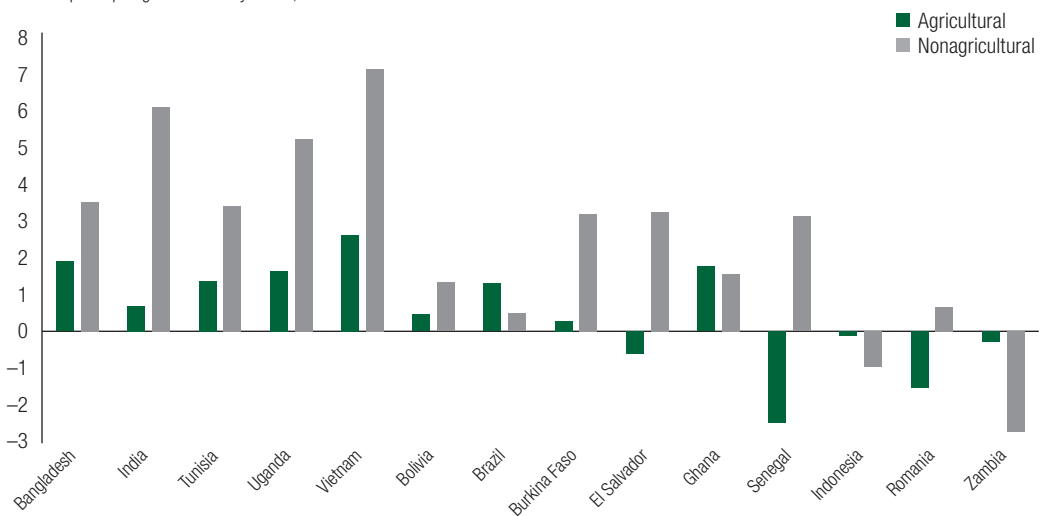
In the 1990s nonagricultural growth (median) was 3.1 percent a year, five times the 0.6 percent for agriculture (figure 2.4). In the high growth countries, per capita nonagricultural growth was between 4 and 7 percent a year, compared with between 1 and almost 4 percent in the medium growth countries and less than 1 percent or negative in the low or negative growth countries. In contrast, per capita agricultural growth rates exceeded 2 percent only in Vietnam.

Macro stabilization measures in most of the country cases were integral to the strong performance of the nonagricultural sector in the 1990s. Efforts to cut inflation and reduce external and internal imbalances (including a move to competitive exchange rates) were particularly effective in stimulating nonagricultural growth. Rising capital inflows from foreign direct investment (from a very low base), aid (particularly in Africa) and remittances also fostered higher growth in many of the countries in the 1990s. Price and trade reforms stimulated exports of manufactures by the Asian countries, Tunisia and El Salvador. Structural and investment policies also contributed to higher growth

*In the 1990s  
nonagricultural  
growth was 3.1  
percent a year,  
five times the  
0.6 percent for  
agriculture*

**Figure 2.4 Nonagricultural growth was five times that of agriculture**

Median annual per capita growth rates by sector, 1990s



Source: Lopez (2005b), based on *World Development Indicators 2004*.

Note: Start and end years same as in table 1.1.

*The average share of the workforce in nonagriculture rose from 40 percent in 1990 to 47 percent in 2000*

in several of these countries. Efforts to improve the investment climate in Senegal, coupled with high rates of investment, stimulated urban growth. High levels of infrastructure spending in Indonesia, Vietnam and Bangladesh fueled nonfarm growth, particularly in rural areas. And better human development outcomes (health and education) improved growth prospects for most of the countries outside Africa (where the AIDS epidemic resulted in reversals on several dimensions).

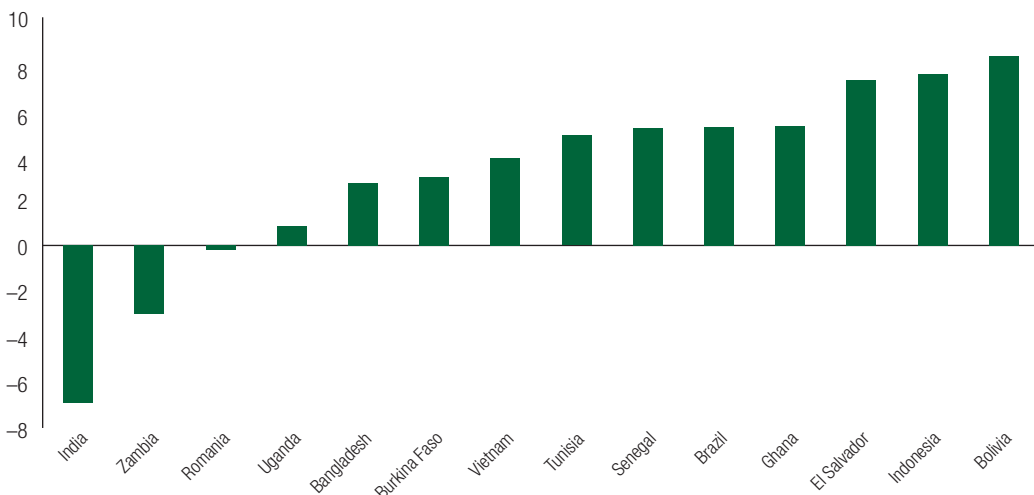
*Nonagricultural growth and poverty reduction*

Nonagricultural employment, particularly in the informal sector, grew in the case study countries in the 1990s, given the strong growth of services and industry and urbanization (figure 2.5). The average share of the workforce in nonagriculture in the 14 countries rose from 40 percent in 1990 to 47 percent in 2000 (statistical appendix). Employment in nonagricultural activities rose significantly in the Asian countries and Uganda, as did the share of nonagricultural income. In Vietnam the share of nonagricultural employment grew from 27 percent to 50 percent between 1991 and 2003. And in Uganda the share of household heads citing agriculture as their primary occupation declined from 72 percent to 58 percent between 1992 and 2003.<sup>5</sup>

In Burkina Faso and Ghana, however, the structure of employment was almost unchanged, heavily dominated by agriculture, reflecting low demand for nonagricultural labor in Burkina Faso and nonagricultural

**Figure 2.5 Urbanization was a driver of nonagricultural growth**

Changes in the urbanization rate from the early to the late 1990s (%)



Source: World Development Indicators 2005.

declining earnings in Ghana, which had high inflation and low investment for much of the 1990s. Where there was a recession the share of agricultural employment rose. For instance, in Zambia, which had no growth during much of the 1990s, the share of agricultural employment grew from 71 percent to 82 percent between 1991 and 1998, as workers in mining and informal employment returned to rural areas and took up agriculture.

While nonagricultural employment accounted for a smaller share of poverty reduction in most countries (because the majority of poor workers were generally in agriculture), the likelihood of climbing out of poverty for households in nonagricultural employment was higher than for those in agriculture, reflecting the sector's higher productivity and generally faster growth. In Senegal the poverty rate for households where the heads were engaged in nonfarming fell from 69 percent to 56 percent between 1994 and 2001, compared with 73 to 69 percent for those engaged in farming. In Ghana the poverty rate for agricultural headed households declined from 66 to 55 percent (a 15 percent decline), while for households engaged in industry, the poverty rate declined from 41 percent to 27 percent (about a 30 percent decline). In Vietnam the poverty headcount fell 31 percent for workers in agriculture, 41 percent for those informally employed and 62 percent for those formally employed.

Within nonagriculture, informal employment grew in the 1990s as the sector absorbed workers from agriculture and from the often shrinking formal sector (box 2.5). Vietnam shows how informal employment helped reduce poverty between 1993 and 1998, while Burkina Faso suggests that if the movement of workers into the informal sector is not accompanied by rising demand for labor, both productivity and earnings for these workers remain low and may even decline. Although moving into informal labor markets can be a stepping stone out of agriculture, there is some evidence that moving into formal sector employment (generally more advantageous) is difficult in certain countries.

Informal earnings also increased in rural areas. Nonfarm income increased in rural areas from wage and self-employment in services and industry, particularly in the growing economies of the Asian case studies and El Salvador. In Bangladesh the share of nonfarm wage and self-employment income for rural households went from 19 percent to 28 percent between 1991 and 2000. In El Salvador the share of nonfarm income in rural areas grew from 47 percent to 55 percent between 1995 and 2001, and accounted for more than half the change in the income of rural households in the bottom quintile.

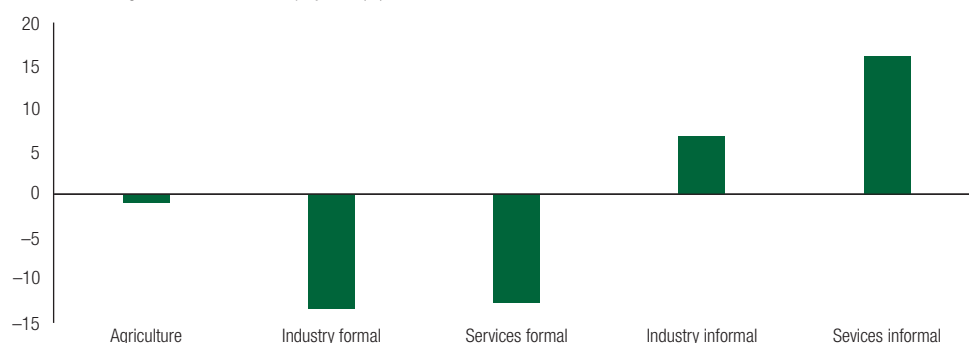
*Within nonagriculture, informal employment grew in the 1990s as the sector absorbed workers from agriculture and from the often shrinking formal sector*

### Box 2.5 Informal employment and poverty reduction—it can be quite effective, but not always

In Vietnam the spectacular growth of the 1990s was accompanied by increased informalization of the labor market (box figure 1). Panel data for 1993–98 show that 14 percent of workers in agriculture in 1993 moved out of the sector almost exclusively into informal employment (box table 1). Similarly, fewer than 20 percent of formal sector workers in industry and services remained in the formal sector between 1993 and 1998, with most of the workers moving into informal employment or agriculture.<sup>a</sup> Mobility into informal industry and services, linked to rapid growth in both urban and rural areas, was highly effective in reducing poverty. Workers who moved out of agriculture into informal employment experienced a 43 percent decline in their headcount poverty rate, compared with only 31 percent for farmers who remained in agriculture.

#### Informal employment expanded rapidly in Vietnam between 1993 and 1998

Annual rate of change in the structure of employment (%)



Source: Bernabè and Krstić 2005.

**Box Table 1. Vietnam: Transition probabilities by type of employment and economic activity (Percentage of population over 15)**

1993	1998					Total
	Agriculture	Industry formal	Services formal	Industry informal	Services informal	
Agriculture	85.4	0.6	0.8	6	7.1	100
Industry formal	18.9	13.4	5.2	41.6	21	100
Services formal	12.5	1	17.4	5.5	63.6	100
Industry informal	30.6	2.7	3	47.2	16.5	100
Services informal	21.1	1.1	6.5	13.9	57.5	100
Total	66.1	1.4	3.1	11.6	17.8	100

Source: Bernabè and Krstić 2005.

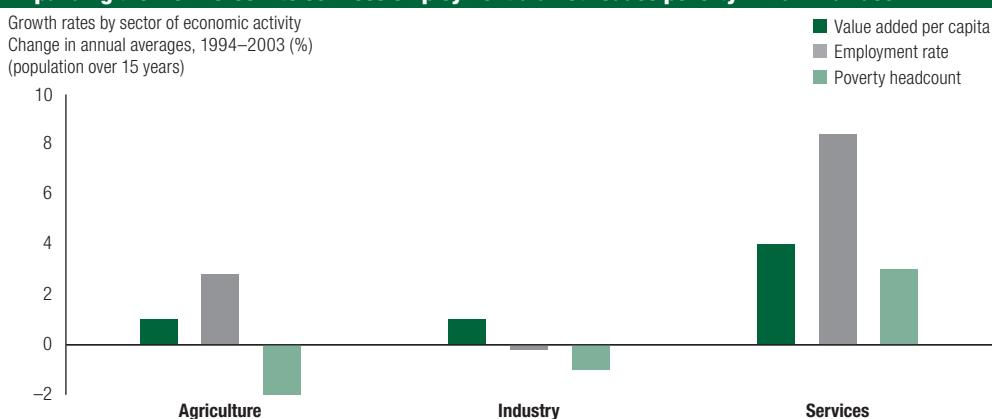
Informal labor markets can expand easily because there are few barriers to entry. But as Burkina Faso and Uganda show, unless an expansion into informal nonagricultural activities is accompanied by a rising demand for labor and underpinned by increasing productivity, informal nonagricultural employment may not be welfare-enhancing. In the 1990s Burkina Faso saw a considerable increase in the share of employment in services (mainly informal trade), as the size of the active workforce expanded to compensate for the decline in real incomes following the CFA franc devaluation (box

**Box 2.5 (continued)**

figure 2). Reflecting the expanded output levels, GDP per capita in services grew by 4 percent a year between 1994 and 2003. But demand for services did not increase, and output per worker declined along with real wages in the sector, causing poverty to rise by 3 percent a year among service workers. In short, the increased supply of workers to services was not matched by increasing labor demand, and as a result productivity declined along with real earnings. Similarly in Uganda movement into nonfarm activities was constrained by low demand for wage and self-employment activities (Appleton and Ssewanyana 2003).

**Expanding the workforce into services employment did not reduce poverty in Burkina Faso**

Growth rates by sector of economic activity  
Change in annual averages, 1994–2003 (%)  
(population over 15 years)



Source: Bernabè and Krstić 2005.

a. The decline in formal sector employment may have reflected the growing practice for industrial and service firms to transform formal sector labor contracts into informal employment arrangements.

*How did poor households participate in nonagricultural growth?*

At beginning of the 1990s Vietnam and Burkina Faso were among the poorest countries in the world, with similar levels of GDP per capita (US\$240) and national poverty rates just under 60 percent. During the 1990s both countries grew and poverty fell, although the growth rate and fall in poverty were considerably greater in Vietnam than in Burkina Faso.

Vietnam's economic growth was led by exports of labor-intensive manufacturing goods stimulated by trade liberalization and a combination of import substitution and export promotion. And growth was accompanied by greater domestic demand for labor-intensive goods and services, particularly in rural areas, as the earnings of agricultural producers (the majority of the workforce) expanded significantly.

Burkina Faso's growth was led by services. But growth in services did not translate into a reduction in poverty for service workers because it

*Growth in demand for nonagricultural goods and services in Vietnam was made possible by wise policies, but also by some important initial conditions*

was fueled by an increase in labor supply, which was not matched by an increase in demand or productivity, resulting in declining real earnings. Agricultural workers accounted for the greatest share of poverty reduction, and the deepest poverty reduction was among cotton farmers. In short, both domestic and foreign demand for nonagricultural goods and services stagnated in Burkina Faso, while the supply of nonagricultural workers increased, causing wages to fall.

Growth in demand for nonagricultural goods and services in Vietnam was made possible by wise policies, but also by some important initial conditions. First, Vietnam, like many of its East Asian neighbors, has a very high population density and a comparative advantage in the production of labor-intensive manufacturing products along with relatively low market transaction costs, not possible in Burkina Faso, which is sparsely populated (49 inhabitants per square kilometer, compared with 240 for Vietnam). Second, Vietnam started the 1990s with a much larger nonagricultural workforce to build nonagricultural growth (approximately 33 percent in the early 1990s, compared with 13 percent in Burkina Faso). Third, Vietnam has a much stronger human capital base, making it possible for agricultural workers to move into nonagricultural informal jobs. Much of Burkina Faso's workforce has no education at all (primary enrollment in 1990 was 33 percent in Burkina Faso). Vietnam also scored fairly high on government effectiveness, which affected its ability to deliver public services, while Burkina Faso was second lowest (after Zambia). Finally, an overriding contributor to the impressive rates of poverty reduction in Vietnam was the commitment of the government to reducing poverty.

Understanding the factors that can allow poor households to take advantage of job opportunities in urban areas (and nonagricultural jobs in rural areas) is crucial for a pro-poor growth strategy. The experiences of Burkina Faso and Vietnam in expanding nonagricultural earnings for poor households underscore the tremendous importance of initial conditions, but they also highlight trade policy and market access, as well as demand linkages between agricultural and nonagricultural earnings. More generally, the country cases underscored four broad policy options to enhance access to nonagricultural earnings for poor households:

- Improving the quality of investment climate, and the overall policy framework.
- Creating attractive formal employment for poor workers.
- Expanding access to secondary and girls' education.
- Increasing access to infrastructure.

As with policies to expand agricultural earnings for the poor, the priorities and the appropriate design and scope of these policy options vary across countries.

*Improving the investment climate and the overall policy framework.* Improving the investment climate and overall policy framework were important for stimulating growth, but so were the size of the formal sector and the labor intensity of growth. The quality of the investment climate, along with the overall rate of growth, has been identified as one of the most important determinants of growth in nonagricultural earnings (World Bank 2004a and Fields and Pfeffermann 2003).<sup>6</sup> In addition, the investment climate affected whether employment was created in the formal or informal sectors, which can influence the quality of employment. Earnings from formal employment tend to be higher, in jobs covered by labor market regulations (dismissal protection, minimum wage, pensions, health insurance).<sup>7</sup> In addition, because informal enterprises operate outside the law, they cannot benefit from the institutional arrangements that encourage innovations, improve the efficiency of markets and enable economic units to realize economies of scale. For the overall quality of the investment climate in the 14 countries, there were variations across regions, and not all indicators were of equal importance (box 2.6).

In Senegal, Bangladesh and Tunisia improvements in the quality of the investment climate, trade liberalization, and special incentives for manufacturing industries led to a significant increase in unskilled manufacturing employment, particularly for women. In Senegal poverty reduction was driven by rising urban employment, reflecting high levels of investment, a competitive exchange rate and a fairly good investment climate. In Tunisia and Bangladesh rapid growth of manufactured exports also created attractive formal sector employment for less skilled workers. By 2000 the textile and garment sector in Tunisia accounted for almost half of total manufacturing employment and 14 percent of total employment. The fast growth of this sector facilitated the absorption of a large active female population with low skills.

***In Senegal, Bangladesh and Tunisia improvements in the quality of the investment climate, trade liberalization, and special incentives for manufacturing industries led to a significant increase in unskilled manufacturing employment***

### **Box 2.6 Investment climate indicators**

Asian countries tended to score higher on the “Doing Business” indicators than the African or Latin American countries. And not all the investment climate criteria were equally binding. Burkina Faso had the lowest score on difficulties in hiring labor, Romania the second lowest score. But the high level of regulations likely had a greater impact in reducing formal sector employment in Romania than in Burkina Faso, where most of the employment is in agriculture. On specific constraints in the investment climate, access to roads and electricity were most consistently cited by firms in Indonesia, India, Bolivia, Zambia, Uganda and Bangladesh,<sup>a</sup> market regulations only in Indonesia, India and Bolivia, and access to finance in all countries but Bangladesh.

a. Investment climate assessments were available only for these six countries. The reports can be found at <http://www.ifc.org/ifcext/economics.nsf/Content/IC-InvestmentClimateAssessments>.

*Expanding access to secondary and girls' education has become more important because of the growing skill bias of nonagricultural employment*

In Bangladesh, by the mid 1990s, the ready-made garment industry employed between 40 and 50 percent of the total workforce engaged in medium- and large-scale manufacturing. The rapid growth of this sector (from 4 percent of total exports to 75 percent between 1984 and 2000) increased the incomes of those it employed. There were also indirect poverty effects: since garment workers are among the poorest manufacturing workers, their spending was biased in favor of inferior quality goods produced in the informal nontradable sector (Osmani, Mahmud, Dagdeviren, and Seth 2003).

By contrast, policy uncertainty, macro instability and capital-intensive development policies undermined labor-intensive employment in the formal sector. In Zambia policy uncertainty and macro instability were major constraints on nonagricultural investment and employment in the 1990s (which led to rising urban poverty). In Ghana, low private investment (undermined in part by persistently high inflation and a poor investment climate) caused manufacturing employment to contract in the late 1990s. In Bolivia 90 percent of manufacturing establishments, accounting for 72 percent of the workforce, were informal. The pilot investment climate assessment from Bolivia reports that “a vast majority of Bolivians choose to operate informally because existing institutions are designed for a privileged minority—those who can afford the high costs required to become and remain formal” (World Bank 2001).

Capital-intensive development strategies implemented before the 1990s in India and Zambia may have contributed to lower demand for labor in industry and manufacturing. In India the capital-intensive large-scale approach to industrialization between 1951 and 1991 may offer one explanation for why secondary sector growth had little impact on poverty (Ravallion and Datt 1996). In Zambia the government in the 1980s invested heavily in capital-intensive manufacturing, encouraged through high tariffs and an overvalued exchange rate. Formal sector manufacturing employment grew slowly during this period and amounted to less than 15 percent of total paid employment.

*Expanding access to secondary and girls' education.* Expanding access to secondary and girls' education has become more important because of the growing skill bias of nonagricultural employment. In India and Brazil poor educational outcomes reduced growth in the different states and reduced the impact of that growth on poverty reduction. Reflecting the limited availability of a skilled workforce, in particular demand in nonagricultural labor markets, several countries noted a growing premium for more highly educated workers. In Bolivia the rise of income inequality in the early 2000s mainly reflected rising returns to skills

and preferential access to jobs. Only workers favored with education benefited from the rising wage premium while the less favored bore the earnings erosion of a sluggish economy and rising unemployment (World Bank 2004b). In Bangladesh, Winters (2002) found that rural unskilled workers were not hired by manufacturing firms because they apparently lacked the required skills.

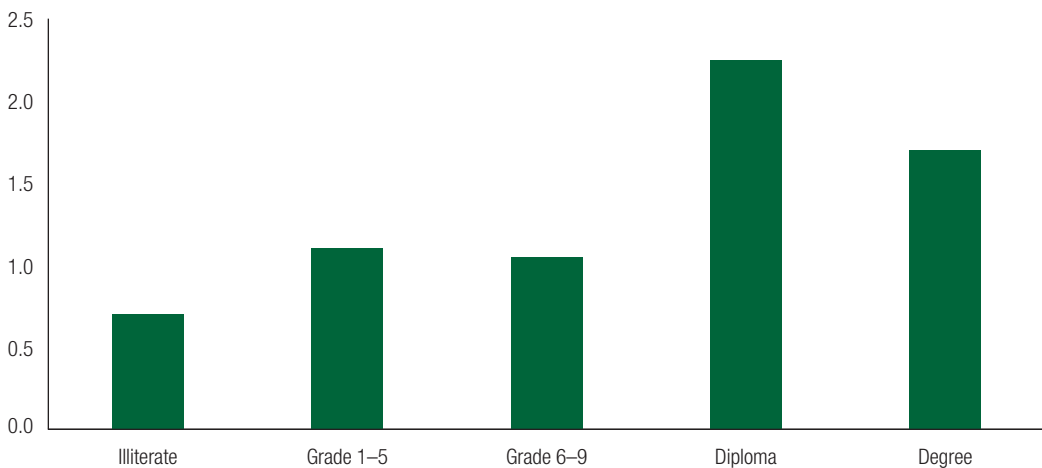
In Uganda education influenced the observed increasing income inequality, with differences in education obtained by the head of household accounting for a rising share of inequality (compared with within group inequality). Between 1992–93 and 2002–03 the contribution of different educational levels to inequality rose from 16 percent to 25 percent, while the contribution of inequality among households where the head had a similar education fell from 84 percent to 75 percent. This shows that the potential for rural workers to get into better paying employment is extremely limited given their low education, which limits their participation in high-growth sectors. In Bangladesh, too, education strongly affected household income growth. (Primary education is nearly universal in Bangladesh, and the secondary enrollment rate was 47 percent in 2001.) Households with higher levels of education (secondary in rural areas and postsecondary in urban areas) had faster income growth (figures 2.6 and 2.7).

Female literacy also enhances the ability of growth to reduce poverty. Female literacy was the most important determinant of interstate differences in India in the efficiency of nonfarm growth in reducing poverty (Ravallion and Datt 1996).<sup>8</sup> In the South Asian and Tunisian case stud-

*Female literacy was the most important determinant of interstate differences in India in the efficiency of nonfarm growth in reducing poverty*

**Figure 2.6 Faster income growth for those with secondary education in rural Bangladesh**

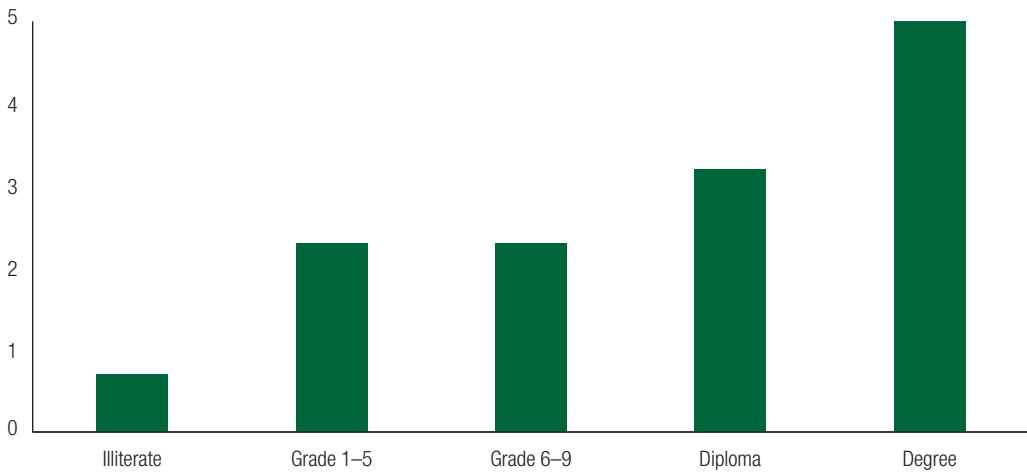
Comparative annual growth rate by education of household head, 1991/92–2000 (%)



Source: Sen 2005.

**Figure 2.7 Faster income growth for those with postsecondary education in urban Bangladesh**

Comparative annual growth rate by education of household head, 1991/92–2000 (%)



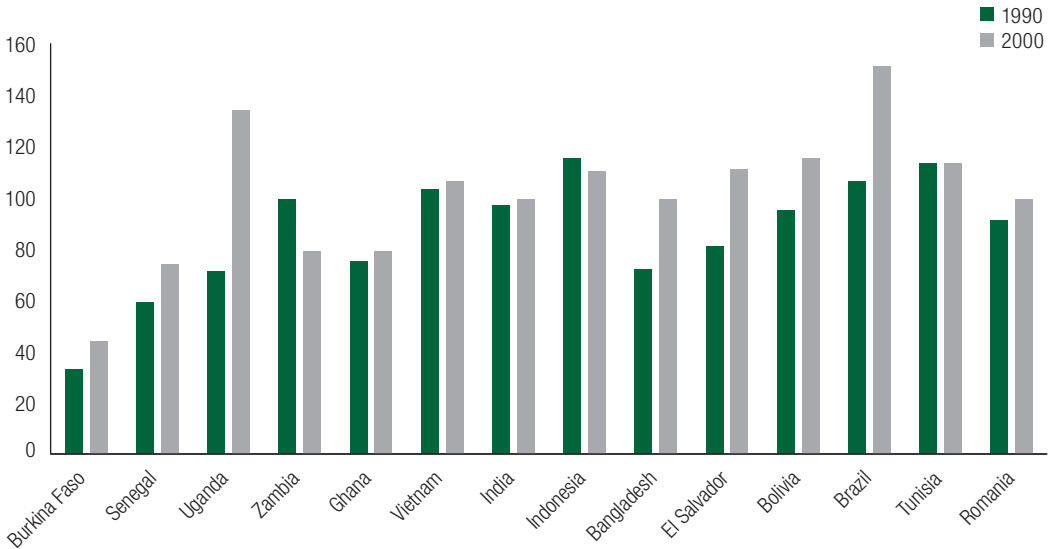
Source: Sen 2005.

ies, the prior fertility decline and the expansion of education contributed significantly to the ability of women to enter the nonagricultural workforce. In Latin America, where women's education is relatively high and rising and fertility is relatively low, female labor market participation has risen greatly. The main barrier preventing greater female involvement has been labor market discrimination, which has crowded women into informal and low-productivity employment. Women are also heavily engaged in nonagricultural employment in El Salvador. But childbearing still constrained many women from engaging in better-paid occupations, and equally qualified women had less access to the best paid nonagricultural jobs (Tannuri-Pianto, Pianto, Arias and Sanfeliu 2004). In short, women benefited from and contributed to growth in export-oriented sectors where fertility rates had declined, women had rapidly rising educational levels, and the work environment allowed female labor market participation.

In general, access to primary and secondary education improved in all countries in the 1990s, except in Africa. The African case countries saw no real improvement in secondary enrollments, and aside from Uganda none had achieved universal primary education by 2000 (figures 2.8 and 2.9). In the other low income countries, secondary enrollments remained small, between 45 percent and 65 percent. Benefit incidence analysis suggests that the majority of the gains in secondary enrolment were not experienced by poorer households. And while the share of secondary education expenditures directed to the bottom quin-

**Figure 2.8 Most African countries still have not achieved universal primary education**

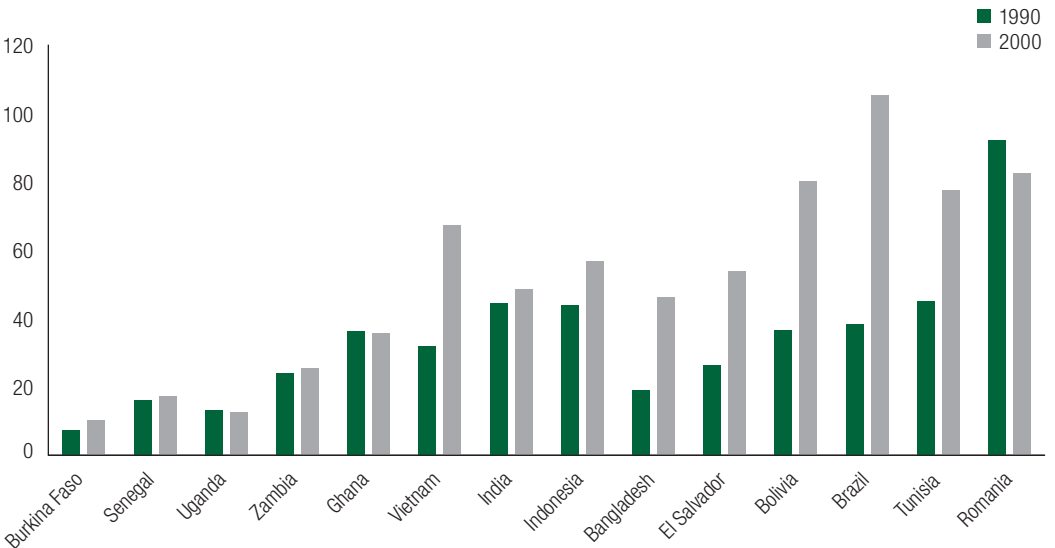
Share of gross primary education enrollments, 1990 and 2000 (%)



Source: World Development Indicators 2004.

**Figure 2.9 Secondary enrollments remain low in both the Asian and especially the African countries**

Share of gross secondary education enrollments, 1990 and 2000 (%)

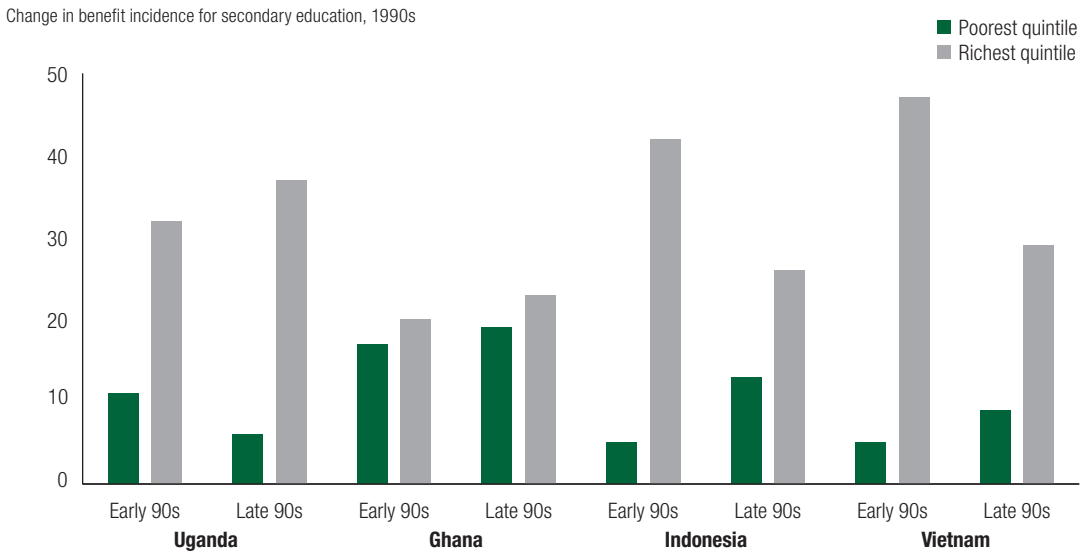


Source: World Development Indicators 2004.

tile increased in the 1990s for Ghana, Vietnam and Indonesia, they actually decreased in Uganda (figure 2.10).

The main instruments to expand access were rising per capita expenditures for education (Bolivia, Bangladesh, Tunisia, Uganda, El Salva-

**Figure 2.10 Spending on secondary education for the poorest quintile rose in Ghana, Vietnam and Indonesia but fell in Uganda**



Source: For Uganda, Mpuga and Canagarajah 2004; for Ghana, Canagarajah and Ye 2001; for Indonesia, World Bank 1993 and Lanjouw, Pradhan, Saadah, Sayed and Sparrow 2001; for Vietnam, World Bank 2000.

dor), increased collaboration with nongovernmental organizations, community organizations and private providers (Bangladesh, El Salvador) and conditional cash transfers linked to education (Brazil, Bangladesh). In tracking educational outcomes it is also important to examine quality and budgets. In Uganda massive increases in primary enrolments undermined the quality of the education: the teachers and textbooks to accommodate the increase in students were not always available, or of high enough quality. In addition, the leakage of educational funds was extensive in the 1990s, since reduced through increasing the transparency of budget management, particularly at local levels.

*Creating attractive formal employment for poor workers.* Designing labor market regulations to create attractive formal employment for poor workers helps expand their nonagricultural earnings, particularly in countries with fast growth. Labor market regulations, often designed to protect the interests of poor workers, can restrict formal labor markets and the access of poor workers. Indian states with more restrictive labor market regulation recorded lower growth and less efficiency in reducing poverty. States that had pro-employer regulations recorded significantly higher growth rates than states with pro-worker regulations. In addition, pro-worker regulation led to less output in registered manufacturing and lower levels of investment.

In Bolivia and Romania “pro-worker” regulations, encouraged by unions and the economic elite, kept employment in the formal labor market below levels otherwise possible. In Bolivia the share of informal employment is among the highest in Latin America, and since the late 1990s nearly all employment creation has been informal (World Bank 2004b). Labor regulations there increase labor costs by an estimated 42 percent (World Bank 2001). Kaufmann, Mastruzzi and Zavaleta (2003) cite tight regulation of the formal labor market (minimum wages, dismissal protection) as restricting access of rural workers and the urban poor to formal income-earning jobs in Bolivia. Entering formal employment is particularly difficult for women, for people for whom Spanish is not the mother tongue and for those who are poorly educated (Tannuri-Pianto, Pianto and Arias 2004). And when workers with these characteristics enter the formal sector in Bolivia, they earn less than others.

During Romania’s negative growth period, workers were forced to return to agriculture in large part because labor markets were inflexible, due to high payroll taxes, a cumbersome bureaucracy and tight labor regulations (especially for unemployment benefits and the minimum wage). By contrast, Indonesia’s high degree of labor-market flexibility during the Suharto years promoted formal employment and labor-intensive growth. Real wages were relatively low, but average earnings rose in the 1980s, as the incomes of poorer sections of the community increased through the transfer of labor into new industries (Ravallion and Huppi 1991 and Manning 1998). But since the Asian crisis, the minimum wage increases prompted by union activity have left almost all employment growth to the informal sector, at wages below those in the formal sector.<sup>9</sup>

Three important caveats: First, labor market regulations are only one of a set of factors that affect the investment climate and the willingness of a firm to formalize. Other critical constraints include policy uncertainty, fiscal burdens, cost of finance, corruption and the quality of courts (World Bank 2005c). Second, loosening labor market regulations in some regions, particularly Africa, may have little impact on labor markets, especially if employment is mainly in agriculture (Burkina Faso). Third, labor market regulations, though imperfect, constitute a form of social protection. The extent of labor market regulation needs to reflect a balance between workers’ needs and employers’ needs, a balance that hangs on a country’s labor market conditions and level of development.

*Increasing access to infrastructure.* Increasing access to infrastructure, especially roads and electricity linking rural areas to small towns and urban centers, along with strong nonagricultural growth, contributed

*Indian states  
with more  
restrictive  
labor market  
regulation  
recorded lower  
growth and  
less efficiency  
in reducing  
poverty*

*Investments in infrastructure were most effective in expanding nonagricultural income generation opportunities for poor households when provided in packages, including roads, electricity and education*

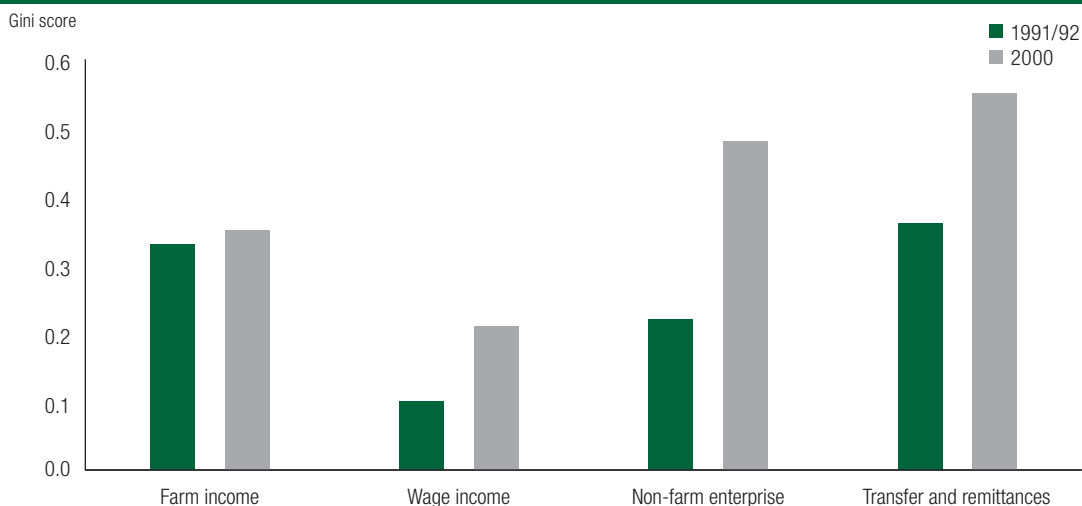
to rising nonagricultural sector employment in rural Bangladesh, India, Vietnam and El Salvador. Nonagricultural employment in rural areas was greater and more effective in reducing poverty when it was linked to the rapidly growing and more urban industrial and service sectors and expanding commercial agriculture.

In Bangladesh the nonfarm sector was traditionally stimulated by agricultural growth, but in the 1990s rural areas witnessed an expansion into productive large enterprises generating demand for wage labor and reducing poverty more than in the previous decade. As a result, returns to rural nonfarm activities in 2000 were about twice the returns to casual wage labor and self-employment in agriculture (more for the nonpoor) (Osmani, Mahmud, Dagdeviren and Seth 2003).

In Bangladesh access to the high-growth nonfarm sector depended on the human capital of workers (especially completing primary education) and access to such infrastructure as roads and electricity. That poorer households in rural areas tend to have lower education and access to infrastructure may explain why nonagricultural income was so disqualifying. Traditional nonfarm activities linked to agriculture tended to be equalizing in the early 1990s, but by the late 1990s nonfarm income had become highly disqualifying, reflecting the trend toward higher productivity nonfarm activities accessible only to households with access to education and infrastructure. While the Gini index of farm income remained constant between 1991/92 and 2000, the Gini of wage and particularly nonfarm enterprise incomes increased significantly, along with income from transfers and remittances (figure 2.11 and box 2.7). As a result, the contribution of nonfarm income to rural income equality in Bangladesh rose from 12 percent to 27 percent between 1992 and 2000, and the Gini for overall inequality in rural areas from 0.26 to 0.30.

In Vietnam access to nonfarm income also became more linked to nonagricultural growth and more concentrated around areas with good infrastructure and market access, reflecting the government's policy to target public investment to priority regions (box 2.8).

Investments in infrastructure were most effective in expanding nonagricultural income generation opportunities for poor households when provided in packages, including roads, electricity and education. Tannuri-Pianto, Pianto, Arias and Sanfeliu (2004) analyze panel data for rural households in El Salvador for 1995–2001 find evidence of important complementarities between rural investments and household characteristics that highlight bundling of packages of infrastructure investments and education. Sectoral mobility in El Salvador was heavily influenced by having at least primary education, larger asset

**Figure 2.11 Non-farm income became a disequalizing force in the late 1990s in rural Bangladesh**

Source: Sen 2005.

### Box 2.7 Remittances reduced poverty but in some countries also increased inequality

Private transfers, mainly international and domestic remittances, provided important income to poor and non-poor households in the 1990s, but they were also a source of rising inequality. The largest remittances were associated with international migration, but domestic migration was more frequent, with migrants often moving to other rural or urban areas in their province or state.

Remittances have been important both in raising the incomes of the poor facilitating investments in agriculture and particularly nonagricultural enterprises. But in many countries richer households have tended to benefit more from remittances than the poor.

- El Salvador shows how remittances grew in the late 1990s, helping to reduce poverty but also contributing to rising inequality. Between 1998 and 2002 monthly average remittances increased by 40 percent for urban households and by 65 percent for rural households. By 2002 remittances were received by about 20 percent of the urban and rural households in relative poverty. But the value of remittances received by nonpoor households was twice the value received by poor households.
- In Ghana remittances grew from less than 14 percent to more than 20 percent between 1991/92 and 1998/99, an important source of poverty reduction in the rural forest region. The reduction of poverty among foodcrop farmers was primarily a consequence of increased remittances, rather than increased agricultural productivity, profitability or involvement in nonagricultural activities (Coulombe and McKay 2003). There is also evidence that the better off and more skilled workers were more able to migrate out of the rural forest zone.
- In Bangladesh remittances from internal migration appeared to be only mildly disequalizing, while remittances from abroad emerged as a highly disequalizing source of income, accounting for about 19 percent of rural inequality.

Source: Country case studies.

### Box 2.8 Targeting public investment in Vietnam

Vietnam has also made massive investments in infrastructure, targeting infrastructure investments to regions with high numbers of poor people and high growth potential. In 1996–2000, the main emphasis was on upgrading the trunk roads and other basic infrastructure in the growth triangles of the northern, central and southern regions. In 1997 these regions generated about 75 percent of the country's GDP and attracted more than 80 percent of foreign direct investment.

The Red River Delta and the South East developed a good rural road network, where nearly 100 percent of the communes had roads that allowed access of automobiles to the commune center. In contrast, roads were still rather under-developed in the poorer regions. In 2000, 8 percent of all communes in the Northern Uplands and 13 percent of those in Mekong River Delta still had no motorized road to their centers (Fan, Huong and Long 2004).

Vietnam chose to prioritize large infrastructure investments over rural infrastructure in an effort to maximize growth. The objective was to promote urban centers as capital and skill intensive production areas and to redistribute the returns through public transfers to rural areas. Although the growth and poverty impact of this strategy was very successful, regional imbalances are growing. So the government proposed significant increases in investment in rural transport for 2001–05—to better link remote areas to productive markets.

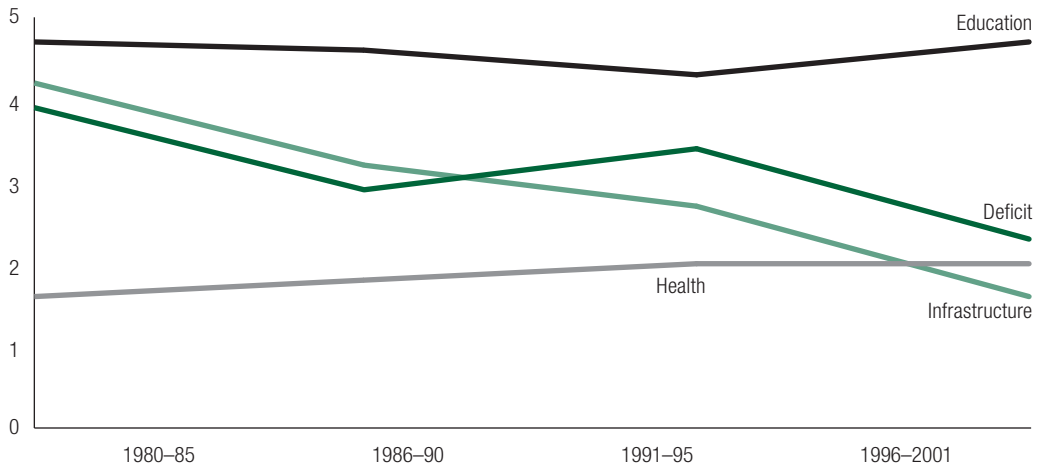
holdings, stable access to electricity and residence close to a paved road.

The lack of infrastructure in the African case countries constrained access to attractive nonagricultural employment in rural areas and kept the rural poor engaged in more traditional and lower return nonfarm activities linked to agriculture. Nonagricultural employment in Africa generally stagnated, reflecting a more traditional sector closely tied to foodcrop agriculture (which experienced very little per capita growth in most of the countries). In addition, high transaction costs in rural areas undermined the ability of rural workers to connect to the faster industrial and services growth in urban areas.

In Uganda access to critical infrastructure was biased toward the nonpoor (96 percent of which are in rural areas). Whereas nonpoor households accumulated total physical assets at about 4 percent a year during the 1990s, poor households did so at 0.3 percent (Deininger and Okidi 2003). The proportion of nonpoor households with electricity in homes grew from 13 percent to 17 percent between 1992 and 2000, while that for poor households fell from 6 percent to 2 percent. Ghana's growing nonagricultural employment was concentrated almost exclusively in Accra, where there was access to services and infrastructure and demand to stimulate tourism, construction, trade and services. As a result, inequality within Accra fell sharply, and the rate of pro-poor growth was 7.6 percent, more than three times the national average of 2.1 percent.

**Figure 2.12 Public spending on infrastructure declined in Africa**

Public spending and deficit, as a share of GDP (%)



Source: IMF Global Finance Statistics database.

Lifting infrastructure constraints, increasing access to electricity, roads and education, particularly in high-density rural areas and small towns, are thus priorities in raising nonagricultural earnings for the poor. And as more governments engage in decentralization, increasing the capacity of local governments to undertake and manage investments in basic infrastructure will attract businesses in economically underdeveloped regions. Indonesia's Investment Climate Survey reports that decentralization in the early 2000s heightened investor concern about corruption, policy uncertainty and business licensing (World Bank 2005d).

Increasing infrastructure investments in Sub-Saharan countries could accelerate both agricultural and nonagricultural earnings for poor households. Yet while health and education spending has been increasing, infrastructure spending has been declining, despite a falling fiscal deficit (figure 2.12). Improving access to infrastructure depends not only on expanding public investments but also on improving institutional quality. In Uganda weak institutions may have prevented the improvement of power infrastructure (Keefer 2000).

## Notes

1. Poor workers also contribute to growth because they make up an important share of the workforce. In Vietnam in 1993 more than half the workforce lived under the poverty line—by 1998 only one-third of the workers were poor. And as their earnings increase, poor workers contribute to growth by increasing their consumption and particularly investment. The country studies did

not, however, analyze factors affecting the contribution of the poor workers to growth.

2. The longer the distance between points for any one country, the larger were the changes in land or labor productivity. This analysis was not carried out for Tunisia or Romania.

3. Data were not available to compute the purchasing power parity agricultural GDP growth rate for Zambia. But based on agricultural GDP at official exchange rates, Zambia clearly belongs in the Africa group.

4. Besley, Burgess and Esteve-Volart (2005) identify services and then secondary employment as the main contributors to poverty reduction across Indian states between 1958 and 1994.

5. Employment data from the FAO indicates that 80 percent of the national workforce was employed in agriculture in 2001, down from 84 percent in 1990 (statistical appendix).

6. A good investment climate is characterized by: a regulatory framework that balances the need to improve opportunities for workers, while also fostering incentives for firms to invest, create jobs and expand; well functioning financial markets; good access to reliable infrastructure (most notably roads and electricity); and transparent and accountable public institutions.

7. Informal employment refers to wage employees for whom the employer does not pay social security contributions (may be approximated by the lack of written agreement); self-employed (own-account workers and employers) in nonagricultural household enterprises; and unpaid family workers in nonagricultural household enterprises. In the countries with data, the share of total nonagricultural employment located in the informal sector is around 60–70 percent; the exception is Tunisia, where it was 40 percent (Schneider 2000).

8. In India multivariate analysis shows a significantly positive relationship between enrollment rates and growth in per capita state income, particularly strong for female enrollments (Trivedi 2002).

9. Manning (1998) notes that increased minimum wages may also exacerbate inequality in Indonesia. If gains in productivity and new job creation in export-oriented industries do not materialize, those displaced by the minimum will place pressure on wage rates in the informal sector and among small businesses.