SEVEN

Repairing Rural Markets

Because today only about 8 percent of GDP in Latin America comes from agriculture, rural markets may seem less relevant than in the past.[1] But nearly 20 percent of the region's labor force still relies on agriculture—in Guatemala, Nicaragua, and Honduras, the share is close to 40 percent—and nearly 40 percent of the region's poor, some 65 million people, live in rural areas.[2]

Inefficient rural markets in Latin America limit productivity growth in agriculture and fail to provide the great majority of rural families with enough income to cross the poverty line. Facing low incomes and increasingly limited prospects, many rural workers migrate to cities, where they join the informal, low-productivity workforce. Low incomes in the rural sector put downward pressure on the wages of unskilled workers in urban areas. Until agriculture is more productive, urban and rural poverty will persist.

A dynamic agricultural sector—characterized by high productivity and income growth—played the key role in the rapid, more equitable growth seen in South Korea, Taiwan, Thailand, Malaysia, and Indonesia during

1. WDI (2006).

2. WDI (2006) and De Ferranti and others (2005). Agriculture absorbs more than one-third of the labor force in Paraguay and about 20 percent of the workforce in Mexico, Brazil, and Colombia (WDI 2006). In Bolivia, Guatemala, Honduras, Nicaragua, Paraguay, and Peru, nearly 70 percent or more of the rural population lives in poverty (ECLAC 2006a).

the latter half of the twentieth century.[3] The agricultural sector was a source of capital and labor for the manufacturing sector. Resources were pulled into manufacturing by rising wages and returns, rather than squeezed out of agriculture by high taxes and stagnant or declining relative incomes, as in Latin America.[4]

Progress and Problems

There have been some signs of progress in the region in recent years. Chile has seen the continuation of the previous decade's upward trend in agricultural productivity and exports, which has had positive effects on other sectors and overall economic growth. Brazil also has experienced increased productivity in its large agro-industrial sector, driven for the most part by a surge in exports of soy, coffee, and sugar.[5] Increasing integration in international markets has expanded market access for more competitive sectors in various countries. Guatemala, for example, has seen rapid growth in nontraditional agricultural exports over the last decade; in the Cooperative Cuatro Pinos, smallholders have been successful in exporting fruits and vegetables.[6] Agricultural producers across the region

3. World Bank (1993).

4. Secure property rights and a relatively equal distribution of land, high investment in rural infrastructure and education, and limited direct and indirect taxation of agriculture meant that rural incomes and productivity rose more rapidly in East Asia than in other regions (World Bank 1993).

5. Since the mid-1980s, Chile has had a highly efficient agricultural sector, the result of a long history of reform, adequate macroeconomic management, and continued investment in knowledge and innovation in agriculture. Even after other countries implemented market reforms in the 1990s, Chile's agricultural productivity was outstanding compared with that of the rest of the region (Acquaye and others 2004). More recently, several countries—including Argentina, Brazil, Peru, and Uruguay in addition to Chile—have seen growth in agricultural production, reflecting the recent commodity boom and increasing demand and higher prices for regional exports. Argentina, Brazil, and Uruguay have expanded their farm exports on the strength of higher prices for soy and its by-products. Some economies were able to benefit from robust demand from high-performing Asian countries, notably China, for meat, cereals, coffee, minerals (copper, iron, tin, nickel, and lead) and agricultural raw materials (ECLAC 2006c, 2004a, 2004b).

6. De Janvry and Sadoulet (2004); Riveros and Santacoloma (2004); Lundy (2006). Other noteworthy examples include Costa Rica's decorative plants and tropical fruit exports; successful exporting to the United States of fruits and vegetables by irrigation farmers in northern Mexico; production of tropical fruits and vegetables for international

also have benefited from the increase in supermarkets and rising demand for value-added food products in domestic markets.[7] The return of macroeconomic stability has helped. In most countries, exchange rate regimes are no longer a tax on the agriculture sector.

But huge numbers of people in large areas throughout the region are still engaged in low-productivity agriculture, some despite relatively easy access to markets and good agro-ecologies. In Nicaragua, half of the extremely poor population lives in rural areas that are within four hours of the capital, Managua. In Guatemala, subsistence agriculture still dominates.[8] Global markets and the rise of supermarkets have so far left small, less productive farmers in the region further behind.[9]

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markets in northeast Brazil; and recent expansion of palm oil exports from Colombia (De Ferranti and others 2004; Damiani 2007; Gomes 2006).

7. Domestic supermarkets have emerged as key players in Latin America's agrifood economy. Their share in national food retail sales jumped from 10 to 20 percent in 1990 to more than 50 percent by the early 2000s. Domestic supermarket demand for fruits and vegetables in the region reached US$24 billion in 2000 while total exports of these products were worth US$10.5 billion in the same year. Fruits and vegetables, dairy products, and value-added foods sought after by supermarkets and consumers in rich countries pay better than basic staples. They also tend not to have such important economies of scale in production, so the potential exists to increase farm income on a limited amount of land (Reardon and Berdegué 2002, 2006; Berdegué and others 2005).

8. De Janvry and Sadoulet (2004) and Alwang and others (2004).

9. In Colombia and Brazil, the regional impacts of trade liberalization have revealed a strong north-south differentiation, with the less competitive north generating far fewer gains than the more productive south (Hewings 2004). Even larger and more sophisticated farmers hoping to export their products must meet stringent international quality and sanitary standards. (See Henson 2007 for an overview of the significant capacities required of agricultural producers to gain access and succeed in high-value nontraditional agrifood export markets). In domestic markets, small producers have been largely excluded from the supermarket boom. Supermarkets' practices regarding quality and safety standards, cost, volume, consistency, and payment have a big impact on farmers, and small producers often are unable to compete due to lack of financing, management skills, and access to relevant technologies. Recent studies show that where medium and large producers are available to meet the year-round demand of processors and supermarkets (as in the case of tomatoes in Mexico), small producers are simply excluded. In other situations, a select group of small farmers, the commercial elite (who, according to evidence, tend to be more educated, to have more access to transport and roads, and to have greater prior holdings of irrigation and other physical assets such as wells and greenhouses), are the only small farmers participating in the modern retail supply channels. Asset-poor small farmers are left out. The few exceptions in the region tend to involve some type of donor or NGO support or subsidy. See Reardon and Berdegué (2002, 2006, 2007); Reardon (2006); and Hazell and others (2006).

Several factors contribute to pervasive low-productivity agriculture. One, of course, is the unequal distribution of land itself.[10] Government programs to redistribute land (with compensation to prior owners) have not worked well—even in Brazil and Colombia, where programs that benefited from extensive technical support financed by the World Bank and the Inter-American Development Bank have foundered in recent years.[11] An alternative approach is to support development of land markets, including rental and leasing markets, which in turn requires a big push to establish clear property rights.

Insecure property rights are a major constraint in most countries, and they affect the poor disproportionately. Land titling and registering programs have advanced slowly. In most of the region, less than 50 percent of farmers who cultivate small and medium-size holdings have legal title to the land, either because no title exists or because there is no official record of it. In the early 1990s, surveys showed that 63 percent of farmers in Chile, Colombia, Honduras, and Paraguay lacked legal title to their land.[12] The lack of an explicit title—and the insecurity of tenure more generally—reduces incentives for productivity-enhancing investments,

10. Latin America has the highest land inequality of any region. Gini coefficients of land distribution are on the order of 0.8, where 1.0 is perfect inequality and zero is perfect equality (De Ferranti and others 2004).

11. Recent initially promising market-oriented land redistribution efforts in Brazil and Colombia are faltering. See Birdsall and de la Torre with Menezes (2001) for a brief analysis of these efforts. Recent studies put part of the blame on the lack of sufficient public resources to make a serious dent in land redistribution through adequate and widespread compensation. Political considerations have often driven governments to target high-productivity areas for redistribution instead of high-potential areas, resulting in costly land acquisitions and little room for a sustained impact on productivity. (In practice, land reform programs in the region often were implemented to address political grievances, with poverty reduction and efficiency considerations taking a back seat.) See World Bank (2005e). Program failures have been also linked to lack of training, complementary inputs, and limited access of beneficiaries to credit (see De Ferranti and others 2004, 2005; Deininger 2003; and Deininger, Castagnini, and González 2004).

12. Tejo (2003); López and Valdés (2001); and De Ferranti and others (2005). ILD (2006e) finds that in Colombia, more than 75 percent of rural properties are outside the formal legal system of titles, registration, and other legal instruments that render property negotiable in the market; in Mexico, the corresponding figure is 70 percent (ILD 2006c). (This includes land without valid title or registry, with legal irregularities, or with restrictions on its transfer.)

limits use of land as collateral, and increases the potential for conflict. It is also a severe obstacle to realizing the efficiency and equity benefits associated with land rental activities, which is especially damaging in a region where land ownership and access is so unequal. In most countries, land rental markets are atrophied and socially segmented due to uncertain property rights and weak enforcement.[13]

Everywhere in the region, agricultural productivity is also limited by suboptimal investments in infrastructure and other public goods in rural areas.[14] In Peru only 5 percent of rural households have access to water, electricity, telephone service, and roads; around 74 percent have access to only one of those goods or to none.[15] Government expenditure in the rural sector has been highly regressive in most of the region and severely biased in favor of big subsidies to specific producer groups.[16] The lack of rural roads is a serious barrier to commerce and trade.[17] Access to credit in rural communities also is limited, especially for small farmers and producers,

13. Where property rights are weak and land tenure insecure, as in most of Latin America, landowners are reluctant to rent out for fear that tenants will establish a claim to the land. So rentals are few, informal, short term, and often restricted to closely related people to facilitate enforcement (Deininger 2003). In Nicaragua, insecure tenure has been shown to reduce participation on the supply side of rental markets (Deininger and Chamorro 2002). In the Dominican Republic, insecure property rights reduce land rental market transactions and cause market segmentation (Macours, De Janvry, and Sadoulet 2004).

14. Many countries expanded rural infrastructure services in the 1990s, but rural areas remain greatly underserved, especially compared with urban areas (see chapter 11).

15. Escobal and Torero (2005). The authors find that rural households in Peru with access to more than one service do much better economically than those with access to only one, with multiple services significantly increasing agricultural productivity and diversification beyond agriculture. On Peru's deteriorating, inadequate rural infrastructure see also Peltier-Thiberge (2006).

16. The share of private subsidies in public rural expenditure in Latin America has declined over the past fifteen years, but in 2001, a number of countries—including Costa Rica, Dominican Republic, Honduras, Panama, Paraguay, Peru, Venezuela, Ecuador, and Uruguay—still spent about 45 percent of their rural budgets on nonsocial subsidies (López 2005). In Colombia in 2005, out of the Ministry of Agriculture's investment budget of US$108 million, US$67.5 million (or 62.5 percent) went to private subsidies, mostly to large producers, about US$ 8.5 million (or 7.8 percent) went to programs to support small farmers, and US$8 million (or 7.5 percent) went to technology and technical assistance programs (Caballero and others 2007).

17. In Peru and Ecuador, only 8 percent of rural and local roads are in good condition. In Colombia, one-third of the rural population does not have ready access to the country's road network (Fay and Morrison 2007).

and credit and other market failures mean poor farmers and rural workers often are unable to exploit new technologies and market opportunities.[18]

Many of the region's poor, finally, live in difficult regions, where low productivity in agriculture reflects geographic isolation, severe lack of access to markets, and very low-productivity biophysical environments. Examples include high-altitude areas in Central America's Altiplano. These are areas where migration may well be the best route out of poverty but where historically the opportunity to migrate has been limited—by language, culture, and low income itself.

What to Do?

What can be done to repair rural markets and boost the potential for agricultural productivity growth in the region? Although local conditions differ, we suggest three priorities below.

Titling

Titling can be the next step to get land markets—rental as well as sales—working in rural areas.[19] Throughout most of the region, macroeconomic liberalization and the elimination of special privileges for large producers have helped to lower land prices considerably, reducing incentives for speculative land acquisition and bringing prices more in line with agricultural profits. In Brazil, following the elimination of tax exemptions on unused land and the end of hyperinflation, land prices dropped by as much as 70 percent in the early 1990s, making it easier to acquire land for productive purposes. In Colombia, overall land prices are now more in line with expected returns.[20] The key step now is titling to secure clear

18. Recent econometric analyses cited in De Ferranti and others (2005) show that in both Brazil and Mexico geographic location affects individuals' ability to gain access to credit regardless of personal, familial, and professional characteristics. Past government interventions in rural credit markets—including through regulatory reforms and interest rate subsidies by public banks—have not met with success. Most programs have struggled with limited outreach, low recovery rates, high costs, and little identifiable impact at the farm level.

19. De Soto (2000) argues persuasively about the benefits of property titling in promoting economic development and reducing poverty.

20. See Reydon and Cornélio (2006) and Reydon and Plata (2002) on the evolution of land prices in Brazil; see Lavadenz and Deininger (2003) on the case of Colombia. During

property rights. Titling increases incentives to invest in land and expands the scope for more efficient land use and greater access of the poor to land through rental transactions. In Nicaragua, Honduras, and parts of Brazil, the receipt of registered title greatly increased the propensity to invest in land, and titling was shown to have a significant positive effect on farm income in Paraguay and Honduras.[21] In Colombia, strengthened rental and sales markets have been more effective than government-sponsored land reforms in providing land access to poor but productive farmers.[22] Of course, with secure property rights must come credit and legal assistance and other competition-enhancing actions to help small farmers exploit land markets.[23]

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periods of macroeconomic instability, investors may use land as a hedge against inflation; therefore an inflation premium is incorporated into the real land price. Because of lower inflation, using land as a hedge has become less attractive in Latin America. But the expected results of land liberalization in terms of greater market activity have only partly materialized, in large part because of low confidence in property rights.

21. In Nicaragua, Deininger and Chamorro (2002) finds that receipt of a registered title increased land values by almost 30 percent and greatly boosted the propensity to invest. Deininger (2005, 2003) reports that in the developing world increased tenure security has been associated with as much as a 50 percent increase in land investment returns and has raised land values by between 30 and 80 percent. Investments associated with tenure security include planting of perennial crops, installation of drainage systems, and adoption of soil conservation measures. In Honduras, López (1996) shows that increases in land and labor productivity associated with titling led to a 5 percent increase in farm income. Carter and Olinto (1998) shows similar results for Paraguay. See Feder (2002) for evidence in Honduras and in Brazil's frontier lands.

22. See Deininger, Castagnini, and González (2004). Recent experience in the region suggests that increasing the access of the poor to land through rentals tends to be less politically demanding and introduces fewer new economic inefficiencies than land reform based on expropriation, and it is cheaper for government than land reform with compensation to original owners (Macours, De Janvry, and Sadoulet 2004).

23. Past experiences, especially in Asia, suggest that to reap benefits, titling should be complemented by a fair and effective legal system; solid, consolidated cadastral surveys; and enforcement mechanisms. In their absence, receipt of a private land title may not provide much tenure security (Deininger 2003). Boucher, Barham, and Carter (2005) reports that in Nicaragua and Honduras, land rights continued to be contested even after major investments in titling and national land administration initiatives in the 1990s. Legal uncertainty was a major factor. In Nicaragua much of the newly titled land has been subjected to competing claims, especially since courts are still processing claims by large landowners whose holdings were expropriated by the government in the 1980s. In Honduras, the titling program unintentionally exacerbated land conflicts by creating multiple claims to land and undermining existing institutions for conflict resolution. Carter (2002) argues that land market activation policies on their own might not produce the fully beneficial productivity and distributional goals expected of them. Ensuring the efficacy of complementary factor markets is crucial—in particular, pairing land policies with programs and policies to improve financial

Increased Spending on Infrastructure in Rural Areas

This does not require expanding budgets. In most countries it requires reallocating public rural expenditures, from big private subsidies to investments in roads, transportation, water and energy distribution, and communications (see chapter 10).[24] Chile has spent more than US$30 million a year on an irrigation-drainage public subsidy scheme that targets a limited number of non-poor farmers. The lucky farmers are paid between 25 and 75 percent of their total investment, up to US$275,000.[25]

Active Policies Geared to Development

Employ active policies that target rural and agricultural development. Investment in agricultural research and development (R&D) and extension services, which is essential to boosting productivity and improving the competitiveness of rural sector activities in the region, would speed diffusion of new technologies and encourage farmers to adopt improved

markets. Land titling programs alone have had relatively weak effects on access to credit in developing countries, including in Latin America (Boucher, Barham, and Carter 2005, 2007). Macours, De Janvry, and Sadoulet (2004) finds that in the Dominican Republic lack of access to working capital constrains participation of the poor in land rental markets; the authors estimate that increasing both tenure security and tenant access to working capital would boost the number of poor families with access to land through rentals by 151 percent and the total land area rented by the poor by 310 percent. Removing the threat of government expropriation in the name of land reform is important (Deininger 2005, 2003). That was a key step in getting land rental markets going in Indonesia.

24. Expanding the coverage of paved roads in particular has been associated with enhanced productivity. A 1 percent increase in road density in the region is associated with an increase of 0.42 percent in agricultural productivity (Bravo-Ortega and Lederman 2004). López (2005) suggests that reallocating just 10 percent of subsidy expenditures in order to supply public goods could increase per capita agriculture income by about 2.3 percent in the region. By contrast, increasing total rural expenditure by 10 percent without changing its composition raises agricultural incomes by only 0.6 percent. In East Asia, the build-up of infrastructure—roads, bridges, transportation, electricity, water, and sanitation—was a key factor in the rapid growth of agricultural productivity and output in the 1970s and 1980s. During that time, countries in East Asia allocated a larger share of public investment to rural areas than did other low- and middle-income countries (World Bank 1993).

25. López (2005). The author finds evidence suggesting that most irrigation services in the region are completely or almost completely subsidized and that they benefit non-poor farmers only.

production and management techniques.[26] In Paraná, Brazil, the Fábrica do Agricultor program has helped small farmers and entrepreneurs to invest in equipment, management, technology, and commercial practices and to develop strong and efficient organizations to meet the requirements of specialized buyers (supermarkets).[27] R&D policies should include efforts to institutionalize agricultural research; support the development and strengthening of scientific institutions capable of training, supporting, and directing agricultural scientists; and help establish links between research systems and farmers.[28] Government support for R&D in Chile was a key ingredient in the country's agricultural success story. Active support from the government for agricultural research and extension services was also essential in East Asia.[29]

Urban land markets as well as rural markets need attention in Latin America. In urban areas, the economic logic of granting formal titles to squatters is becoming more and more clear. Hernando de Soto's work has emphasized how titling of poor people's property can unleash its otherwise suppressed value.[30] Titling offers security and facilitates investment in home improvements and community-based businesses. One recent study of titling in Buenos Aires found positive effects on housing investment, school achievement, and nutrition and a reduction in teenage pregnancy rates.[31]

26. Empirical studies suggest that average annual rates of return on investments in agricultural R&D are in the range of 40 to 60 percent. Agricultural research is also shown to have positive effects on the alleviation of poverty across a wide range of countries and technologies (Acquaye and others 2004).

27. Reardon and Berdegue (2002, 2006) and Del Grossi and Graziano da Silva (2001). In Paraná, the state government, with financial and technical support from multilateral development banks, has provided small local food processors with technical assistance, training in marketing, and commercial contacts to help them sell to supermarkets in intermediate-size cities. To facilitate commercial relations, a state-level licensing/certification program for businesses also was created.

28. Brazil alone accounts for 50 percent of total regional agricultural research spending (Argentina, Brazil, and Mexico together account for about 85 percent). Agricultural research organizations in the region are relatively new and most are small; the majority have less than 200 researchers. Brazil and Mexico, responsible for 50 percent of regional agricultural output in the 1990s, employ more than two-thirds of the region's agricultural researchers, while Central America, which produced 12 percent of total output, employs only 8 percent (Acquaye and others 2004).

29. De Ferranti and others (2005) and World Bank (1993).

30. See De Soto (2000).

31. See Galiani and Schargrodsky (2007, 2004).

To promote equality, countries should put a high priority on funding for urban land titling programs. The public sector needs to finance these programs, but experience has shown that they should be managed by private groups that are held accountable for results. In Peru, the COFOPRI (Comisión de Formalización de la Propiedad Informal) program regularized 1.6 million lots and registered more than 1.2 million titles in just over five years by streamlining administrative and legal procedures and adopting a large-scale approach to regularizing vast tracks of illegal housing.[32]

32. As a result of the reforms, roughly 80 percent of Peru's eligible residents became nationally registered property owners, affecting about 6.3 million individuals (Field 2004). Field and Torero (2006) provides evidence of the positive impact of Peru's titling program on beneficiaries' access to credit.