

Privatization and Deregulation: A Push Too Far?

GOVERNMENTS IN THE 1990S traded the commanding heights of their economies for more nearly free marketplaces. Despite many successes, state-owned firms had frequently become inefficient, overstaffed, and a drain on public budgets. Earlier attempts short of privatization had failed to improve their operations. Governments recognized that they might have taken on a role that they could not adequately fill and that a greater reliance on markets would be beneficial.

Privatization and deregulation were often parts of a broader set of reforms to improve economic efficiency, and their speed and extent reflected individual countries' convictions and circumstances. More rapid and widespread in Latin America than in Africa or South Asia, the privatization process also varied by sectors. Its proximate causes differed. Some countries sought greater operating efficiency; others, fiscal revenues, and many acted under pressure from international lenders. Utilities were sold because capacity was fast becoming a bottleneck and governments lacked the needed funds to invest. In Eastern Europe and the former Soviet Union, privatization was central to the transition to market economies, and was part of a much wider process of societal change.

Many observers now ask if privatization and deregulation were pushed too far. Today's dissatisfaction is not limited to countries where, as in the Russian Federation, a few well-connected people took over some large firms cheaply. Two-thirds of

the respondents to a 2002 survey in 17 Latin American countries agreed that "privatization of state companies has *not* been beneficial" (up from 43 percent in 1998). Even in the United States, some commentators ask if current bankruptcies in airlines and telecom can be traced to earlier deregulation. Skeptics cite the impressive economic growth of India and China, where the government's role in allocating resources has been reduced and this change has been popular.

This chapter first describes the background to the deregulation movement (in section 1) and then outlines the efforts made during the 1990s to privatize state-owned firms, especially in the transition countries (section 2). Studies that evaluate the experience with privatization are reviewed in section 3; they all find that benefits have followed. Section 4 focuses on the privatization of infrastructure and other utilities. It finds that, contrary to some perceptions, privatizing utilities did not hurt the poor. Consumers with access (a few of them poor) paid more when prices were raised, but they benefited when service improved, as it did by any physical measure of performance. Expectations on the role that the private sector could play in infrastructure clearly proved unrealistic, however. Section 5 analyzes recent attempts in Latin America and Eastern Europe to increase the private sector's involvement in the provision of pensions and social security; it finds instances where privatization may have been pushed too far. Section 6 concludes the chapter.

1. Privatization in Market Economies

In the 1950s and 1960s, governments in developing countries sought the commanding heights of their economies to promote economic development, and many newly independent countries, seeking to assert their authority, nationalized firms that belonged to their erstwhile colonial masters. State ownership was also thought to promote development in areas where the private sector was too risk-averse or myopic to see the latent, untapped profit. State-owned firms coexisted with privately owned ones. Even in the United States, the government had been taking a major role in the economy since the 1930s' Great Depression, but generally did so through regulation, not outright ownership.¹

The move to privatize stemmed more from pragmatism than ideology. Attempts to improve failing public enterprises, for example through professional managers, independent boards of directors, or performance contracts, had not succeeded. By the end of the 1980s, reformers had reached broad agreement that nothing short of privatization would do.

The (American) Regulatory Revolution

The impetus behind the privatizations of the 1990s began decades earlier in the United States, where a regulatory revolution starting in the late 1970s won over many economists, and visibly improved consumer prices and services in air travel, telecom, and other industries.

The first bold step was the deregulation of the airline industry, starting with the abolition of the Civil Aeronautics Board in 1978. Real fares halved between 1978 and 2000, and service improved in ways the public valued, such as flight schedules and frequency. Airlines became more efficient in a variety of unforeseen ways. They bought more fuel-efficient fleets and developed computer reservation systems and statistical models to price-discriminate among different types of passengers to fill all flights. They developed the hub-and-spoke system to balance the public demand for frequent flights against

the capacity and fuel economy of their fleets. Their productivity increased: passenger miles doubled with only half as many more employees between 1977 and 1987. Sometimes it took strikes and bankruptcy filings to shake off inefficient working practices that were embedded in company cultures and union agreements. Some aviation pioneers could not adapt—Pan Am, TWA, and Eastern went out of business—but others emerged such as Southwest, with its vigorous low-cost and customer-friendly culture.

This success emboldened the U.S. government to tackle AT&T. In 1984 the Department of Justice broke up American Telephone and Telegraph (or “Ma Bell”) into one long-distance and seven regional firms (the Baby Bells) offering local services. Figure 6.1 shows how customers switched in increasing numbers to MCI and other competitors. By 1996, the price of a telephone call per minute was only 40 percent of its 1984 level.

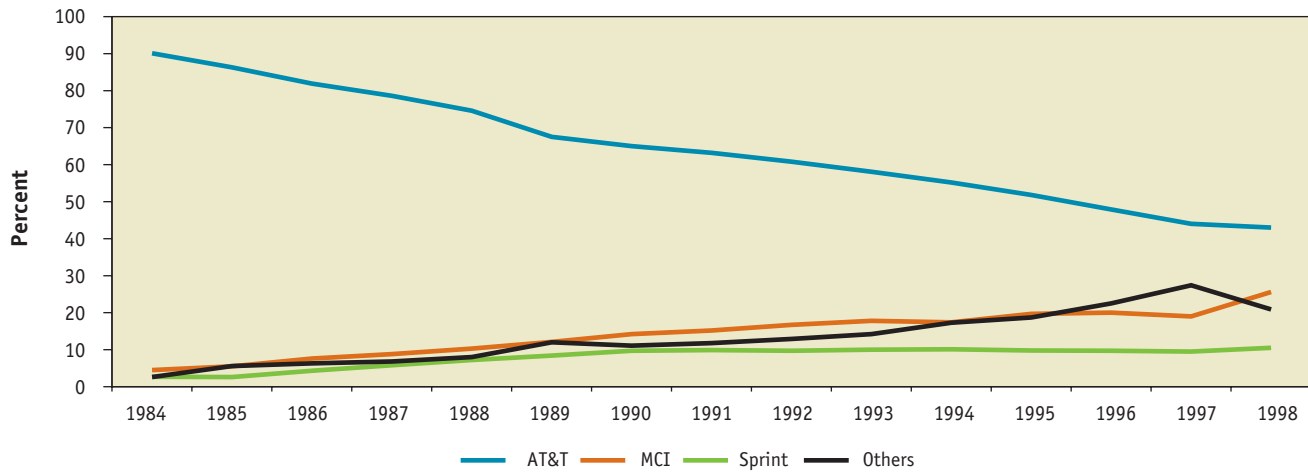
When mobile telephony arrived, eliminating the rationale to regulate (there was no longer a fixed line creating a natural monopoly), the Federal Communications Commission had already learnt its regulatory lesson: it auctioned the necessary radio spectrum, enriching the U.S. Treasury by \$9 billion, and ensured that there was adequate competition. Most of the 100 largest metropolitan areas in the United States now have at least five cellular telephone providers. Public awareness of the benefits from deregulation greatly increased.²

Spread of the Privatization Trend

The United Kingdom followed the United States' lead. In the 1970s and 1980s, the government privatized firms in coal, steel, railroads, telecom,³ electricity, and even water, despite fierce opposition from militant trade unions, and when the initially skeptical public was won over, the Labor government that succeeded Mrs. Thatcher's Conservatives did not reverse course. The rest of Europe was slower to privatize, but the rules introduced by the European Union to create a single market limited subsidies to loss-making firms, and this led to many firms being sold. Italy dismantled and began selling

FIGURE 6.1

Market Shares of Revenues for U.S. Long-Distance Carriers, 1984–98
(percent)



Source: Crandall and Hazlett 2000.

parts of IRI, and France and Germany sold part of their telecom stakes in the late 1990s.⁴

Some Latin American countries began a deregulation and privatization process as early as the 1970s. Chile removed a panoply of controls that had accumulated over decades, and privatized utilities and even social security, in part because of its economic plight in the 1970s and the reformers’ academic links to American universities. Chile’s subsequent economic growth emboldened Mexico, Brazil, and Argentina to follow suit, developing techniques such as debt-to-equity swaps to extinguish their accrued external debts. Countries tended to privatize firms in competitive industries before tackling infrastructure and utilities. Chile privatized telephones in 1990, and Mexico had sold 361 of some 1,200 state-owned enterprises by 1992, thereby virtually eliminating subsidies that had amounted to almost 14 percent of its gross domestic product (GDP).⁵

Countries in Africa have privatized much less than Latin American or transition countries, and more reluctantly. Between 1991 and 2001, roughly 2,300 privatizations worth \$9.1 billion affected fewer than 40 percent of Africa’s state-owned enterprises. Just four countries—Ghana, Côte

d’Ivoire, Nigeria, and Zambia—accounted for a third of these transactions. Nellis (2003a) observes that in Africa often “the principal motivation for privatization has been to placate the international financial institutions.” An ideological suspicion of capitalism, perceived to be hand in glove with colonialism, or the influence of vested interests, and sometimes both, delayed beneficial changes. But as governments abandoned trade protection and indirect subsidies (for example, directed lending from banks that the state controlled), the firms’ losses and inefficiencies became more apparent.

Thus by the start of the 1990s, privatization and deregulation were well under way in Latin America along with a growing, if controversial, move to do the same elsewhere.⁶ The trickle became a flood with the collapse of central planning in Eastern Europe and the former Soviet Union.

2. The Great Transition Sale: Haste to Avoid Waste⁷

The scale and speed of privatization in the transition countries of Eastern Europe and the former Soviet

Union were vastly greater than in the market economies, and the process spawned new techniques.

When centrally planned economies collapsed and turned to markets, the need for privatization was self-evident, and most of the discussion centered on *how* this should be accomplished. Advocates of rapid privatization won the day, but critics now question the haste and point to mistakes that were made: assets were sold to cronies at low prices, and the many institutions that are vital to supporting the market have been slow to develop.⁸ Minority shareholders have few protections, and privatization sometimes resulted in the new owners stripping assets and spiriting them abroad rather than investing to improve their working.

Before judging this experience, however, it is important to appreciate how chaotic and dysfunctional state ownership had been.

Opening Pandora's Box

State ownership in the former Soviet Union countries was far murkier and complicated than the term suggests. There was a fundamental difference between selling state-owned firms in countries where markets function and supporting institutions exist and doing the same in countries where the state collectively owns all assets.⁹ In the latter, laws protecting private property could be readily passed, but enforcing them required a daunting array of institutions that communism had destroyed. A state that is strong enough to protect private property is also strong enough to confiscate it, especially when its finances are desperate. The former East Germany could rely on West Germany's institutions after the unification, but other transition countries did not have this advantage.

While the law may state that the state owns something (or everything), somebody (it is never clear who) controls its use, and such usufructory rights have value despite the absence of a market. In the former Yugoslavia, for example, a firm's workers "clearly" owned the firms, and a portion of their wage funds financed the investments, but did retirees who had financed the older machines also

have claims? The land under the firm "clearly" belonged to the state, not the firm, but did the usufructory rights transfer automatically and would they pass with the firm or with the building? State ownership of the land is a meaningless concept if the land is automatically transferred with either the enterprise or the structure, but if the land is not part of the package, how can the firm be sold?

Restitution claims added another dimension of complexity and confusion. Communist governments had confiscated properties and their former owners and heirs wanted them back. Some claimants had left the country but were willing to return; many others had remained, some of them still working on the confiscated farms and firms. The situation was even more complicated in countries such as Hungary, Poland, and Ukraine where earlier rounds of confiscation under Nazi occupation made it harder to determine whose claims to honor and, where national boundaries had also shifted during and after World War II, whose laws applied. Sometimes the records were unclear or lost. Firms were the more pressing issue because they were struggling for survival: GDP in transition countries was falling rapidly and people were undergoing great hardship. Since the Soviet Union had often located firms strategically, ignoring transport costs, its division into 15 republics wreaked havoc on firms that were freed to buy or sell as they pleased. Many found that their suppliers and/or buyers had become foreigners overnight. Borders were erected where none existed, and tolls were extracted as each republic sought revenues from customs duty to pay for basic services such as the police.

Firms scrambled to cope. Many managers were part of the *nomenklatura*, and while some sought political protection and favors on the firm's behalf, others did the reverse. Some managers resisted the changes, others adapted, and some exploited the situation to their personal advantage. Survival often required laws to be broken, and smugglers and criminals prospered, corroding values, politics, and societies. The breakdown of credit and central plans led to the increasing use of barter, shortfalls in cash led to workers being paid in shoes or commodities,

and machinery was scavenged to produce products that could actually be sold.

This then was the background against which the discussions on privatization took place.¹⁰ The situation did not allow for a fully informed debate, and even participants who agreed about what to do often disagreed over the reasons. Some argued that the creation of a market to replace central planning did not necessarily require firms to be privatized, or at least not immediately. Janos Kornai (1990), the eminent Hungarian economist, warned that the state should guard the wealth it was entrusted with until a more responsible owner came along, but such a course was impossible in countries where the government had lost effective control. Other protagonists favored rapid privatization: some to prevent the asset stripping that was becoming blatant, and others because it was “necessary to create a market economy” in the sense that privatization was expected to create a demand for more market-supporting institutions.¹¹ Some who favored restructuring the firms before selling them to raise more revenue were opposed by those who lacked confidence in the managers.

The experience of the *Treuhand*, created to sell the state-owned assets of East German firms after the fall of the Berlin Wall in 1989, provided early lessons. The *Treuhand* had to cope with the economic effects of the political decision to unify the two Germanys: an overvalued currency that reduced competitiveness and inflexible labor laws and practices that exacerbated the resulting unemployment. Asset values eroded quickly through neglect. Simple and quick sales were better, and imposing additional and largely unenforceable requirements (employment maintenance clauses and/or investment requirements) greatly reduced potential buyers’ interest. It was inefficient and pointless for the government to restructure a firm in hopes of a better price, as restructuring could often be done better by buyers.

China’s experience was often cited to argue that transformation and growth could be achieved without privatization, but the difference may lie more in labels than in substance (box 6.1), for

China’s experience in practice underscores the importance of incentives and the growth of private enterprise. The fundamental difference between China and most countries in Eastern Europe and the former Soviet Union was the continuing power of China’s Communist Party despite the internal political turmoil. Changes in the relations between the central and local governments and in their control over enterprises often amounted to privatization in all but name, and the process was just as turbulent and nontransparent as privatization in the transition countries.

The Process

The “when” to privatize was quickly settled: the sooner the better, although the “how” really set the pace.

The decision on what to privatize was also perfunctory: as much as possible. No distinction was drawn between regulated industries and competitive ones, although a few countries enacted but could not properly enforce antimonopoly laws.¹² Indeed, economists’ forays into political science were unchallenged when they claimed that windows of opportunity might soon slam shut.¹³ Telecom, particularly licenses for cellular telephony, was an especially lucrative business to privatize, and thus many telecom licenses were sold with exclusivity provisions to increase revenue despite the lower welfare implied.

Transition countries did not privatize their banks as they did firms, not because of a grand plan but more because buyers would not be forthcoming until governments dealt with the mountains of nonperforming loans and the banks’ negative net worth. Inflation reduced the stock of deposits, and the public was wary of entrusting banks with savings. As a result, banks had little to lend—a condition that may have helped harden the budget constraint on firms, quite independently of firms’ privatization per se.

Diverse decisions were made on how to privatize. Conventional techniques were clearly inadequate to the task at hand. The United Kingdom divested 20 firms in 10 years and Mexico 150 in six.

BOX 6.1**China: Stealth Privatization**

Before 1978, China's plans covered almost every decision of a state-owned firm—output, pricing, investment, working capital, labor use and wages—but unlike the Soviet system, China allowed a great deal of local autonomy in practice. Although the state-owned enterprises (SOEs) were owned by the central government, many were effectively controlled by provincial or municipal governments, because the center set highly aggregated production targets and credit flows.

Reforms began in agriculture with the “household responsibility system.” The initial move was to allocate land among the 20 constituent households of a commune and allow each to sell more than the contracted grain-procurement quota at uncontrolled prices, and to keep the proceeds. Deng's now famous remark that the color of the cat did not matter so long as it caught mice assuaged fears that this small move away from collectivist orthodoxy would be crushed. Output and incomes rose, and by 1982, this system had been adopted by 80 percent of China's rural households and had spread to manufacturing.

Similarly in manufacturing, the “management responsibility system” evolved to give state enterprises more autonomy over their operations. Firms negotiated their own arrangements for limited profit retention, dual-track pricing, and some investment autonomy, which gave them incentives. Within firms, the relations and authority of technical managers and party officials shifted to reflect personalities and changes in the powers of central and provincial governments. Municipality-owned township and village enterprises (TVEs) expanded their production of highly profitable light industrial products and SOEs were per-

mitted to have joint ventures with private foreign investors.

These joint ventures amounted to a form of stealth privatization. SOEs contributed productive assets or space in exchange for equity in a joint venture; foreign investors provided funds, newer machinery, and management expertise. SOEs often hold social assets (such as cafeterias, housing) and show losses that mask the joint ventures' profitability.

While many observers have credited TVEs as the driver of China's growth, comparative studies of provinces show that (1) TVEs flourished more when genuine private firms were prevented from emerging, and (2) provinces with genuine private firms grew faster (Huang 2003). This “private sector” (both private firms and firms in the government's statistical category that includes TVEs) emerged before legal restrictions on its existence were eased. Provincial governments often tolerated, and sometimes encouraged, its operations, notwithstanding laws to the contrary. The TVEs could not obtain financing from banks, but nevertheless managed to thrive. Although the state-owned banks only lend to SOEs, the SOEs in turn fund private suppliers and joint ventures.

China's experience also illustrates De Soto's (2000) important distinction between *de facto* and *de jure* ownership. While it would be ideal if both were congruent, China illustrates the importance of *de facto* protection. In contrast, most East European transition countries emphasized *de jure* protection. Perhaps the absence of laws in China did not deter entrepreneurship because the presence of laws had not protected people during the Great Leap Forward, the Cultural Revolution, or other tumultuous episodes.

The transition countries required an approach that could do much more, and faster. Poland had 8,400 state-owned enterprises accounting for 70 to 80 percent of GDP at the outset; but many spun off subsidiaries, and it was hard to keep track of the changing numbers and sizes.

Since many firms were too large for any small group of investors to buy, and—more important—workers and managers could disrupt and deter unwelcome buyers, employee ownership arose almost out of necessity in all transition countries. Poland's 1990 Privatization Law, for example, required managers and the workers' council to agree before a firm could be sold. Disputes then arose over whether diffused ownership in general, and employee ownership in particular, was a good idea. While most commentators conceded that workers should be given *some* shares, especially if doing so would stave off unrest and opposition, only a few wanted all firms given entirely to their employees—especially since this would short-change workers in those firms facing a bleak future who would, besides losing their jobs, have only worthless scrip.

Having mutual funds as intermediaries seemed sensible, and it was heroically thought that the funds would jumpstart a stock exchange that would permit holdings to be subsequently reshuffled, should owners so desire (Bell 1995). This proposal satisfied the proponents of broadly based share distribution as well as those who sought incentives for committed owners. It was a source of pride that the Warsaw Stock Exchange, first established in 1871, was reopened in the former Communist Party headquarters in 1991 to trade the equity of five privatized firms. But although the U.S. Agency for International Development (USAID) and other donors lavished technical assistance, most of the exchanges that were established in the transition countries have since atrophied.¹⁴

All these discussions took place separately but not simultaneously or identically in each country, with everyone looking over others' shoulders to see what was being done elsewhere. Many countries adopted similar techniques with some variations.

Mass Privatization through Vouchers

Mass privatization through vouchers is simple in concept even though its administration is complex. The government prints and distributes vouchers (free or, to prevent their being scorned, for a token sum), perhaps unequally to favor some groups (such as military veterans, widows). The vouchers are then used in lieu of cash or as supplements, to bid for firms being auctioned to the highest bidders (with many variants, for example allowing sealed bids for controlling interests). The government thereby exchanges its equity in state firms for vouchers that are then extinguished.

Many commentators extolled the virtues of mass privatization,¹⁵ noting that auctions allowed a firm to be sold to the buyers most likely to add value, and that vouchers allowed governments to separate distributive from efficiency considerations. Vouchers could be allotted to reflect the government's distributive desires, and secondary market trading (of vouchers or of shares on the stock exchange) would result in efficient clustering of owners and holdings of firms. It was hoped that voucher schemes would act as the seedling of the stock exchange.¹⁶

Poland was the first to consider vouchers, in 1989, but it did not introduce them until 1995, so in practice the use of vouchers is indelibly associated with the Czech Republic. Many other countries, including Albania, Estonia, Georgia, Mongolia, and Russia, introduced variants of the Czech voucher scheme that each differed in important details. The Czech Republic allowed, and tacitly encouraged, the creation of mutual funds so that the public need not have to select from among the thousands of firms for sale. It was thought that these 20 or so funds would oversee the firms, because their expertise and sizable stakes would help ensure that firms were well run. In contrast, Poland's government organized the funds itself, but critics contend that this procedure was hardly an improvement over the ministries that had overseen firms in the previous era.

The outcomes attributable to voucher schemes are not impressive. The redistribution of wealth that

is possible through vouchers is minor and may not have been worth the effort. Benefits were not as widely distributed as might appear: most recipients sold their vouchers for a fraction of their face value,¹⁷ often to the firms' incumbent managers. Privatization created value, but it generally accrued to the controlling owner, and other owners received little.

3. The Results: Gains, but Controversies As Well

In general, large benefits followed privatization, even though they differed across countries and stakeholders. Workers and consumers could benefit through higher wages and lower product costs even where firms were sold too cheaply, but there is also evidence that the benefits have been greater when privatization has been transparent and conducted fairly.

Because many things changed simultaneously, however, the benefits that followed privatization are not proof that privatization was their cause. More studies will not resolve the debate because empirical work cannot disentangle the effects of each of the many changes that accompanied privatization, and theory is not decisively against government ownership.

Nor is it clear *how* the benefits arose: for example, did owners oversee managers better or did lenders stop financing losers? Was it because managers had the freedom (or incentive) to do their job, or because private owners demanded (and so obtained) better managers, or because overstaffing was reduced, or because soft budget constraints were hardened? The reasons could differ by firm, but if so, they cannot be gleaned from aggregate data. Even if privately owned firms fare better than state-owned firms, is this performance due to a selection bias, whereby only those firms with a better potential were sold?

Evaluating benefits is also a complex task because the substantial transfers among different stakeholders vary over time, often for reasons, such as business cycles, that are unrelated to the sale. Owners' gains can be measured by profits, divi-

dends, and/or equity prices (which may not move together); workers' gains can be measured through wages, but one must also correct for changing employment and skill mix, which is hard to do. Workers losing their jobs often find alternative employment, but tracking these changes requires data that are difficult to compile. Hence reliable studies are difficult and expensive, and lag privatization by several years.

The discussion below draws on comprehensive literature surveys by Megginson and Netter (2001); Djankov and Murell (2002); and Nellis (2002, 2003a, 2003b). One strand looks at how firms in market economies fared after privatization and who gained and who lost. Another strand looks less carefully (because data are less complete and reliable) at outcomes in transition economies.

Evidence from Market Economies

In a thorough study of the privatization of 12 major firms in four different countries, Galal et al. (1994) find substantial net gains (averaging 30 percent of predivestiture sales) in all but one (table 6.1). Workers always gained, as did owners and governments, and consumers benefited in half the cases.

Megginson, Nash, and van Randenborgh (1998) examine a different but larger sample and find substantially the same results. The postprivatization performance of 61 firms in 18 countries (6 developing and 12 industrial) showed substantial improvements in different measures of efficiency: profit margins were higher and so were inflation-adjusted sales per employee, as well as the ratio of capital expenditures to sales. Employment increased after privatization by an average of 6 percent.

Boubakri and Cosset (1998) find similar results from the same type of study, covering more firms. Their sample of 79 newly privatized firms between 1980 and 1992 included many from low-income countries. While profitability and efficiency rose significantly, they rose more in upper middle-income countries than in low-income countries.

Nellis (2003b) surveys studies of Latin American privatization, one of which, dealing with Mexico,

TABLE 6.1

Winners and Losers from Divestiture in 12 Case Studies

(percent)

Country and enterprise	Domestic					Net welfare change	Foreign			World net welfare change
	Govt.	Buyers	Consumers	Workers ^a	Others		Buyers	Consumers	Others	
U.K.										
British Telecom	2.7	3.1	4.9	0.2	-0.1	10.8	1.2	0.0	0.0	12.0
British Airways	0.9	1.4	-0.9	0.3	0.0	1.7	0.4	-0.5	0.0	1.6
National Freight	-0.2	0.8	0.0	3.7	0.0	4.3	0.0	0.0	0.0	4.3
Chile										
CHILGENER	-1.4	2.0	0.0	0.1	0.0	0.7	1.4	0.0	0.0	2.1
ENERSIS	-1.6	7.6	2.2	3.9	-7.4	4.6	0.6	0.0	0.0	5.2
CTC	8.0	1.0	131.0	1.0	4.0	145.0	10.0	0.0	0.0	155.0
Malaysia										
Malaysian Airline Systems	5.2	2.0	-2.9	0.4	0.0	4.6	0.8	0.8	15.8	22.1
Kelang Container Terminal	37.6	11.5	6.2	7.0	-11.9	50.4	2.9	3.1	-3.0	53.4
Sports Toto Malaysia	13.6	10.7	0.0	0.0	-13.0	10.9	0.0	0.0	0.0	10.9
México										
Teléfonos de México	13.3	11.4	-62.0	15.6	28.3	6.6	25.1	0.0	17.9	49.5
Aeroméxico	62.3	3.9	-14.6	2.4	-2.3	52.9	1.8	-6.2	0.0	48.5
Mexicana de Aviación	3.5	-1.4	-7.7	0.0	3.2	-2.4	-1.3	-3.3	0.0	-7.0

Source: Galal et al. 1994.

Note: All figures are the annual component of the perpetuity equivalent to the welfare change, expressed as a percentage of annual sales in the last pre-divestiture year.

a. Includes workers both in their role as wage earners and as buyers of shares.

can be singled out to illustrate the typical findings. LaPorta and de Silanes (1998) analyze the pre- and postprivatization performance of 218 Mexican firms in 26 different industries that were privatized between 1983 and 1991. The authors find a 24 percent increase in average profitability, as measured by the ratio of operating income to sales, arising from increases in productivity (57 percent), labor retrenchment (33 percent), and price increases (10 percent) (table 6.2). Profitability rose more in competitive sectors than in noncompetitive sectors; so these gains did not arise from an increase in monopoly power. Mexico had some 1,155 state-owned firms in 1982, accounting for about 14 percent of GDP; and the government sold 150, liquidated 260, and merged an additional 400 firms

by 1988—all before the privatization wave in the 1990s with infrastructure firms including telecom.

In Argentina, some 150,000 workers were dismissed between 1987 and 1997 following privatization; 90,000 workers were dismissed when Brazil privatized the railroads. Not all countries have ways to ease workers' transition from one job to another; certainly finding alternative employment that adds value is easier in a growing economy. To find the full effects, one must look at employment beyond the privatized firms. No study has tracked displaced workers in such a manner.

Nellis (2003a) surveys the studies of African privatization and finds impressive benefits. A 2001 study commissioned by the Zambian Privatization Agency found that 235 of the 254 enterprises pri-

TABLE 6.2

Performance Changes in Privatized Firms in Mexico

	Changes in industry-adjusted performance				Competitive vs. noncompetitive industries (according to prospectus)				Competitive vs. noncompetitive industries (according to market share)				
	N	Mean change	s.s. (%)	Median change	s.s. (%)	N	nc	Mean change (difference)	s.s. (%)	N	nc	Mean change (difference)	s.s. (%)
<i>Profitability</i>													
Operating income/sales	168	0.353	1	0.153	1	134	32	0.061		104	62	0.108	
Net income/sales	168	0.412	1	0.211	1	134	32	-0.146	10	103	62	-0.026	10
<i>Operating efficiency</i>													
Cost per unit	168	-0.183	1	-0.152	1	134	32	0.106	1	104	62	-0.049	
Log(sales/employees)	166	0.935	1	0.896	1	134	32	0.151		106	62	0.33	5
<i>Labor</i>													
Log(# of employees)	169	-19.05	10	-24.47	1	136	33	-0.273	5	107	62	-0.069	
<i>Assets and investment</i>													
Investment/sales	168	-0.048	1	0.067	1	134	32	-0.005		104	62	-0.005	
<i>Output</i>													
Log(sales)	170	0.489	1	0.424	1	136	33	-0.215		105	61	0.206	
<i>Net taxes</i>													
Taxes	168	26,441	5	2,161	1	135	33	-7,024	1	106	61	1,013.6	

Source: LaPorta and López de Silanes 1998.

Note: s.s. (%) = statistical significance to a % level; c = competitive, nc = noncompetitive. The columns that compare competitive versus noncompetitive show the difference in mean change ($\Delta_{\text{competitive}} - \Delta_{\text{noncompetitive}}$). There are two definitions of competitive: (1) according to privatization prospectus, and (2) according to market share (>10 percent is considered noncompetitive).

vativized since 1991 continued to operate. The investments in nonmining firms were worth more than \$400 million; but the largest deals had been in mines where improvements did not materialize, a result that warrants a brief explanation. Zambia nationalized its copper mines shortly after independence in 1964. The mines benefited from the copper boom in the 1970s and suffered with its crash (fiber optics had reduced the demand for copper worldwide).¹⁸ The state-owned Zambia Consolidated Copper Mines (ZCCM) was too poorly managed to adjust and was a burden on the rest of the economy. Early privatization may have helped save the mines, but the government was loath to give up a source of corruption and patronage. As a result, privatization discussions that began in 1991 (under donor prodding with a new government) dragged on through the decade, despite losses averaging US\$15 million a month. A \$1 billion offer during 1996–97 from a

consortium of experienced mining firms was rejected, and ZCCM was finally sold in 1999 after the assets had further deteriorated.¹⁹ The consortium is reported to have invested more than \$350 million in the Konkola Copper Mine,²⁰ but no one seems to know whether the Treasury received any cash proceeds or what happened to them. Even this sale was subsequently canceled when the Anglo-American consortium abandoned the purchase. Privatization can improve how a firm operates but not the world prices for commodities it produces. Even so, earlier privatization could have prevented the mines from deteriorating to a point where massive outlays were needed before they could operate. The outlays were uneconomical with low copper prices, resulting in the mines being closed.

Nellis also cites studies by Boubakri and Cosset (2002) examining 16 privatizations (10 in Morocco and 6 in Tunisia) where investments and profitabil-

ity were found to have risen. Jones, Jammal, and Gokgur (1998) examine 81 privatizations in Côte d'Ivoire and find better performance with net benefits for about 25 percent of predivestiture sales. Appiah-Kubi (2001) finds benefits from the 212 privatizations in Ghana. Andreasson (1998) finds improved performance of divested firms in Mozambique and Tanzania. Temu and Due (1998) find that of the 158 firms Tanzania divested through 1999, two-thirds were sold to nationals (South African firms that buy larger-value firms and breweries are resented) and that government revenues rose and subsidies to state-owned enterprises fell.

Evidence from Transition Countries

Across 27 transition economies, more than 150,000 large enterprises and several times as many small firms have not been merely sold but transformed. Despite the assertions that outcomes would have been better had privatization been done differently, the fact that it *was* done is a remarkable achievement, and numerous studies show that it was beneficial.

These studies vary in quality, however. The early ones were more scorecards than evaluations, and as better studies became available they showed some of the early bloomers of privatization fading. For example, the Czech Republic, long the darling of the advocates of speed, stumbled in 1997, and its GDP recovery was delayed until 2000.²¹ Poorly managed privatization was held partly responsible, because firm managers and funds were allegedly too busy looting from noncontrolling shareholders to focus on adding value. The Russian loans-for-shares scandal and other shenanigans such as coercive purchases of workers' shares by managers have also muted the initial enthusiasm for privatization.

Pohl, Anderson, and Djankov (1997) examine firm-level data, and find that countries that privatized more and faster restructured better.

Weiss and Nitkin (1997) find that *who* bought the firms seemed to matter. Djankov and Murell (2002) find the greatest gains arose when firms were sold to outsiders rather than workers. This pattern could be the result of adverse selection; work-

ers were often sold firms that outsiders thought unviable, and the findings would follow if the outsiders were correct on average. Frydman et al. (1999) correct for such adverse selection by examining a random sample of mid-sized manufacturing firms in the Czech Republic, Hungary, and Poland. They too find that selling to outsiders resulted in greater gains. So who buys the firms does seem to matter, although we do not quite understand why.

Moving from firms to the aggregate, the conclusions are also not clear-cut. Endowments (initial conditions), policies, and institutions all matter for economic growth. Output recovered sooner in some countries than in others; and critics make much of the fact that the swiftest sellers did not grow the fastest, but this argument ignores the role that endowments and other factors play.

One important lesson from the experience is that market-supporting institutions—well-functioning courts, credit agencies, accounting firms—did not spring up in response to the demand that privatization created. Advocates of speed countered critics' arguments at the time by pointing out that such institutions would not emerge without a demand for them. Even if they were right, however, privatization should not necessarily have been slower, given the propensity for asset-stripping mentioned earlier. In the Czech Republic, it was not the speed of privatization but the government's disregard of provisions to protect minority equity holders' interests that drove investors away from the Prague Stock Exchange and turned voucher funds into untrustworthy mutual funds.

Even the features now recognized as mistakes were not viewed at the time as critical flaws.²² Incentives operate through people; and if people perceive unfairness or fear social turmoil, they may not invest for the future and the gains may not follow. While the incentives for privatization normally are to create and increase value, the fears that ownership of the large Russian firms (that were unfairly purchased) would be reversed have encouraged asset-stripping and capital flight. So although privatization has been beneficial when viewed as a whole, the manner of the sale matters.

4. Utilities: Why the Disappointments?

Utilities is the collective label for a range of disparate industries (telecom, electricity, roads, railroads). Their privatization is discussed separately in this section because of the more complex regulatory issues involved. The outcomes have often been disappointing, and this section examines why.

Utilities in developing countries had often failed to invest enough to keep pace with improving technology or growing populations. Most of them were short of funds because, in turn, governments kept prices low, thinking that the poor could not pay for the services the utilities provided. Indeed, few of the poor did pay, because few of the poor had access to the services (figure 6.2). Underpriced services such as electricity and piped water were overused by the nonpoor. Nor did governments compensate utilities for the financial shortfalls that low prices and unpaid bills implied, because the owner (the state) either did not know or did not

care and sought to retain power and/or patronage. Utilities operated erratically because revenues rarely covered their costs: funds would dribble in from belated price increases, erratic budget transfers, and/or forced loans from government-controlled banks when the enterprises were in danger of shutting down. This instability played havoc with maintenance and planning and reinforced poor management. The facilities deteriorated even as population grew and, with it, demand.

The Invisible Burden on the Poor

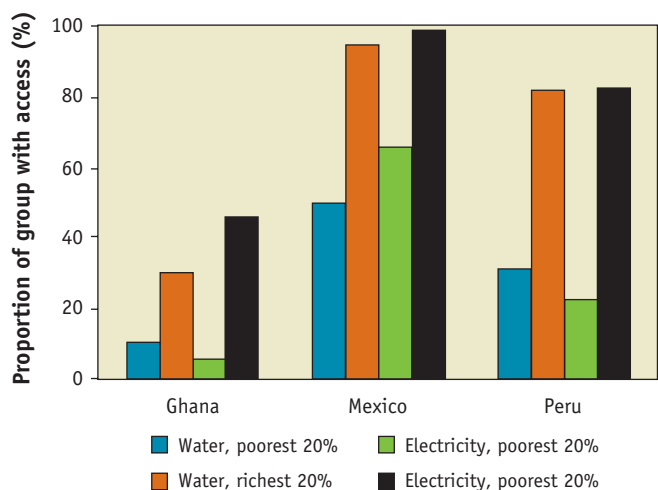
The true costs of neglecting infrastructure are enormous and the financial shortfall in the utilities is only the tip of the iceberg. But even the tip is huge: public monopolies in power, water, roadways, and railways have annual losses of almost \$180 billion (\$55 billion in technical losses and \$123 billion due to pricing), equivalent to almost the total infrastructure investment in all developing countries.

Taxpayers pay the costs of underpriced power and water, but people without access bear a larger invisible burden because alternatives are much costlier. A familiar sight in many developing-country cities is the array of water tanks on the rooftops of homes—the costly individual response to erratic city water supply. Investment in such tanks is a social waste: the storage is inefficient and the overall water supply is not augmented. The poor suffer more: lacking the funds (or land titles) to invest in storage, they pay dearly for water delivered by truck. Similarly, lighting with a paraffin or kerosene lamp costs 10 to 20 times as much as running an electric lamp; powering radios is far more expensive with batteries than with electricity; and so on (Brook and Irwin 2003). Almost all types of infrastructure are desperately needed, and while the returns from such investments are high, the magnitude of the investments needed is daunting.

Governments began to privatize utilities because they could not cope with the attendant problems and were emboldened by the euphoria over privatization in general and by the specific successes of some countries. Chile broke up and privatized its

FIGURE 6.2

Access to Basic Services, by Income Group—Ghana, Mexico, and Peru



Source: World Bank, *WDR 1994*.

electric utilities in 1978; the United Kingdom did so in 1989, Argentina and Norway in 1991, and New Zealand in the mid-1990s.

In developing countries the scale of utility and infrastructure privatization was immense: between 1990 and 2001 more than 2,500 private infrastructure projects worth \$805 billion were privatized (Harris 2003). Latin America and the Caribbean accounted for almost half (\$397 billion), followed by East Asia, Eastern Europe, South Asia, with the Middle East and Sub-Saharan Africa tying for the rear (table 6.3). By sector, the bulk was in telecom (\$356 billion) and electricity (\$268 billion).

These often-cited data sum up the value of infrastructure *transactions* (actually commitments), rather than physical *investment*. The transactions benefited developing countries' fiscal and/or balance of payments accounts, but additions to capacity were likely far lower than the buyers' outlays to buy existing utilities. Figure 6.3 shows the breakdown by divestiture and greenfield projects, but even these data may not accurately represent physical investments in

additional capacity. Calderón, Easterly, and Servén (2002) report that aggregate infrastructure investments declined as a share of GDP in Latin America between 1980–84 and 1995–98: from 3.1 to 0.2 percent of GDP (itself often falling) in Argentina, 5 to 2 percent in Bolivia, 3.7 to 0.6 percent in Brazil, 3.1 to 1.7 percent in Chile, 2.5 to 0.4 percent in Mexico, and 2.0 to 0.6 percent in Peru. This aggregate decline is still consistent with increased investments in the privatized firms (separate data are harder to compile), but if expectations of improvements were based on transaction commitments, the disappointment is not surprising.

Differences across Sectors

The value of privatization transactions led to great expectations, but since meager investments did not ease the capacity bottlenecks, disappointments inevitably ensued. Experience varied greatly by sectors. Although few transactions have been reversed,²³ many are being renegotiated: some 74

TABLE 6.3

Investment in Infrastructure Projects with Private Participation in Developing Countries, 1990–2002 (2002 US\$ billions, by region or sector)

<i>Region or sector</i>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
East Asia and Pacific	2.7	4.3	9.7	13.7	17.1	22.2	32.1	39.0	10.6	9.8	15.0	12.4	9.7	198.4
Europe and Central Asia	0.1	0.4	1.4	1.5	4.4	9.5	12.4	16.0	13.1	10.0	23.2	7.3	9.7	109.0
Latin America and the Caribbean	14.9	12.9	16.5	19.3	19.5	20.2	29.6	55.3	77.0	39.9	40.5	34.3	17.3	397.2
Middle East and North Africa	0.0	— ^a	0.0	3.6	0.4	0.1	0.4	5.7	3.4	3.2	4.1	3.9	1.6	26.4
South Asia	0.4	0.8	0.1	1.4	3.4	4.2	6.6	6.8	2.8	5.0	4.2	4.6	5.5	45.8
Sub-Saharan Africa	0.1	0.0	0.1	0.0	0.8	0.9	1.6	4.8	2.7	4.8	3.4	5.0	3.5	27.8
Energy	1.3	1.3	13.1	15.9	17.2	25.4	34.2	51.6	30.5	18.0	28.4	14.9	16.5	268.3
Telecommunication	6.3	13.7	8.0	9.9	18.8	20.2	28.5	44.3	56.3	38.7	47.3	40.2	23.7	355.8
Transport	10.5	3.4	4.7	5.8	9.0	9.7	18.1	22.1	19.3	9.0	9.9	10.0	5.2	136.6
Water and sewerage	— ^a	0.1	2.0	8.0	0.5	1.8	2.0	9.4	3.5	7.0	4.9	2.5	1.9	43.6
Total	18.0	18.5	27.7	39.6	45.6	57.1	82.8	127.5	109.6	72.7	90.5	67.6	47.3	804.5

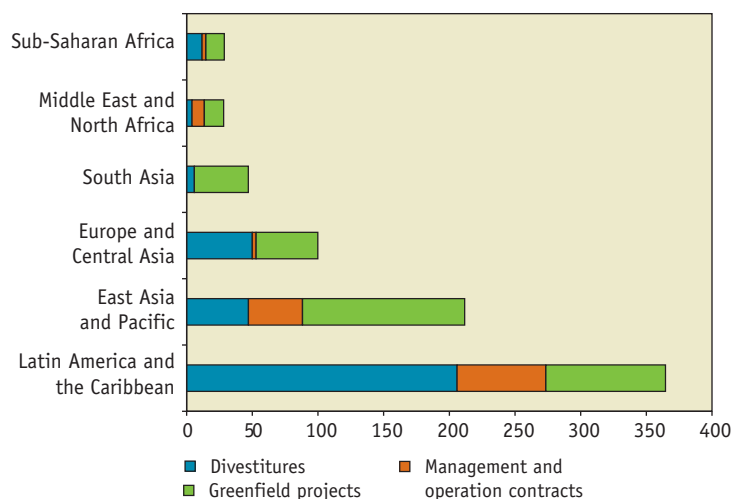
Source: World Bank, PPI Project Database.

a. No private participation in infrastructure occurred.

FIGURE 6.3

Infrastructure Projects with Private Participation, 1990–2001

(2001 US\$ billions)



Source: World Bank IPP Project Database.

percent of transport and 55 percent of water concessions in Latin America. The examination below illustrates the issues involved.

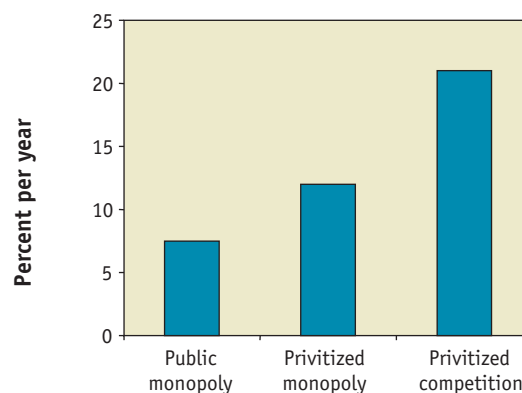
Telecommunications

Telecommunications was a clear privatization success. While technology provided the impetus, the size of the gains was influenced by the competition that regulation encouraged. Privatization and new entries expanded the network, increasing operating efficiency and labor productivity. The productivity gains did not reduce employment, and network expansion absorbed overstaffing. Figure 6.4 shows the gains from competition, both among cellular providers and those with fixed lines. Latin American countries that granted monopoly rights of 6 to 10 years to their privatized telecommunications operators expanded their networks to 1.5 times the size under state ownership. Countries that retained the right to issue competing licenses did even better.

These gains were within the reach of all countries, including those that had not traditionally benefited from much foreign investment.

FIGURE 6.4

Growth in Latin American Telecom Lines (percent per year)



Source: Wellenius 1997.

Box 6.2 describes how the increase in access was financed in Bangladesh. Cellular telephone costs also declined; but the potential for future gains remains immense: although the number of GSM (Global System for Mobile Communication) phone sales doubled in 2003 to almost 21 million in India, only 7 percent of India's 1 billion people have access to any type of phone. China already has 200 million cellular phone users (more than the United States' 140 million). Despite the recent bursting of the dot.com and telecom bubble, the potential is still immense.

The gains in telecommunications were the result of (1) technological changes that almost eliminated natural monopolies; (2) low coverage in most developing countries, which allowed substantial gains from expansion; and (3) inequitable cross-subsidies in pricing, which allowed higher overall prices, benefiting the poor through increased access and the well-off with new and better services. The private sector's better financial, technical, and managerial resources have a distinct advantage in keeping abreast of this increasingly complex industry.

Electricity

Electricity restructuring and privatization are more complicated because unique characteristics deter-

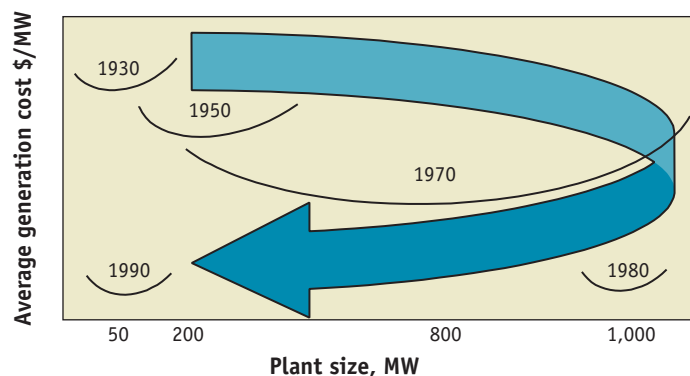
BOX 6.2
Cellular Phone Operators in Rural Bangladesh

Around the world, new service providers have taken advantage of drastically reduced economies of scale to enter global and local markets, increasing competition and reducing prices. Women in Bangladesh have taken the possibilities of cellular technology further than in most countries. Using microloans of little more than US\$30, women in rural areas have set themselves up as small-scale operators in a business that can offer a net annual income of over US\$600, or more than twice the 1997 per capita GDP. Grameen Bank, which provides microcredit to small-business investment, financed the purchase of payphones by entrepreneurial women in villages from Grameen Telecom, its subsidiary. Starting in March 1997, within three years of its first operation Grameen Telecom had provided phone access to nearly 2.8 million people in 1,100 villages. Access to phone services has brought many benefits to poor communities beyond the additional income to operators: it reduced communication costs (particularly transport) and raised farmers' income by providing information on market prices that increased their bargaining power with middlemen.

mine how the market functions. Electricity is the ultimate real-time product with its production and consumption occurring at virtually the same instant. Peak-time supply is very inelastic near full capacity and demand shifts seasonally as well as during the day, depending on such factors as temperature.

Recent technological advances affecting location and hence transmission capacities have dramatically changed the cost structure of electricity generation (figure 6.5). Technological improvements in gas tur-

FIGURE 6.5

Optimal Size of U.S. Generating Plants


Source: Bayless 1994.

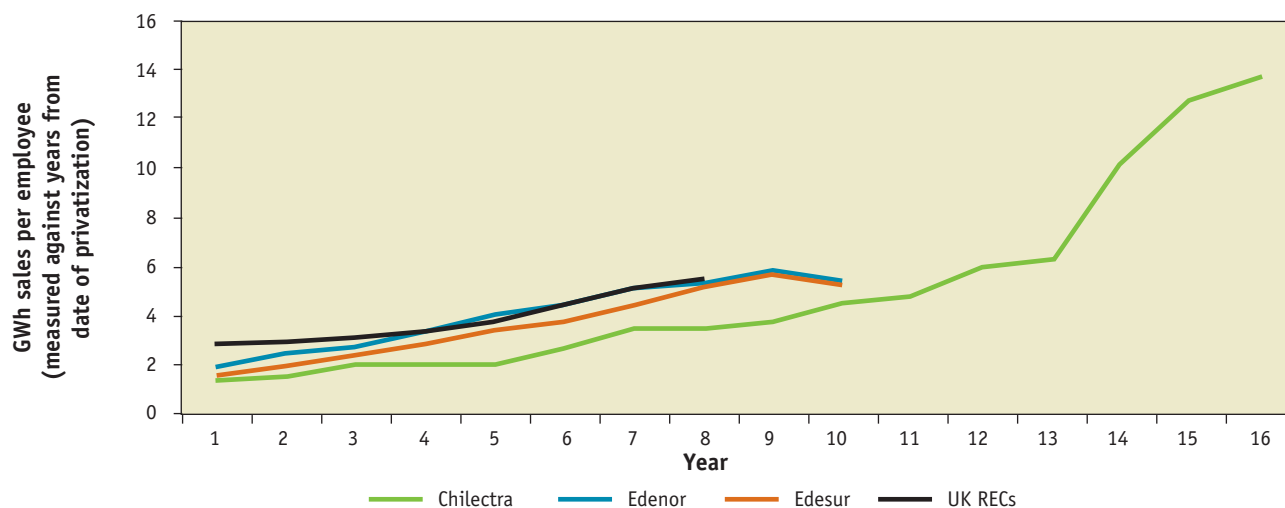
bines allow smaller, less-polluting generators to be built more quickly near cities. Similar developments in wind generators and photo-voltaics may change the competitive potential of electricity in many countries, both developed and developing. These developments have allowed the market for generation to become competitive, and many countries have benefited from allowing such competition.

Of the many countries that reformed their electricity sectors in the 1990s, most achieved good outcomes. When done properly—with vertical and horizontal restructuring, privatization, and effective regulation—reform significantly improved operating performance: labor productivity rose, sometimes dramatically in generation and distribution; technical and nontechnical losses fell; and service quality rose (figure 6.6). Most reforms attracted considerable private investment in generation and distribution (though much less in transmission) thus reversing the underinvestment of recent decades. Electricity prices have fallen in many Latin American countries as wholesale markets have developed and new generators with lower costs have augmented supplies. As retail prices start to reflect underlying costs, cross-subsidies have been reduced and in some countries eliminated.

Not every country is equally well positioned to gain through new technology and attendant

FIGURE 6.6

Postprivatization Labor Productivity in Electricity Distribution in Chile, Argentina, and the United Kingdom



Source: Pollitt 2003.

restructuring of ownership. Brazil, for instance, has a largely hydro-based power system, and box 6.3 illustrates why uncertain rainfall and multiuse dams preclude substantial gains from privatization, even of its nonhydro generators. In other situations, as in Norway, privatizing hydro-based power yielded substantial benefits.

Reaping the potential gains that technology now allows, however, requires countries to change the thrust and manner of regulation. Electricity prices have been kept so low in most developing countries for so long that raising them to reflect underlying costs will be politically difficult. In several developing countries, attempts to raise tariffs in the face of acute power shortages have led to street riots that have caused the increases to be reversed. Although private entrants will naturally demand a credible commitment that future prices will be adequate before investing, few countries provide such an undertaking.

Potential Problems in Power Markets

Two additional issues deserve greater attention: (1) many developing countries are too small to benefit

from competition in the power sector, and (2) the single-buyer model (since the gains are from generation) entails great risks.

Privatization is not always appropriate and its suitability depends on the country's circumstances. Many developing countries are relatively small: 60 have a system peak load below 150 megawatts (MW), 30 have a load between 150 and 500 MW, and another 20 a load between 500 and 1,000 MW. Under the most favorable circumstances, the opportunities for introducing competition in such small systems are limited, as suggested by the market shares shown in table 6.4. Some of the smaller countries may benefit by linking their grids where possible to those of their neighbors (small, distant islands obviously cannot) and pursuing a regional as opposed to a national approach to regulation.

The Asian financial crisis exposed the risks involved when independent power producers (IPPs) sell to a state-owned utility through long-term power-purchase agreements (PPAs). In Indonesia, Malaysia, the Philippines, and Thailand, rapid economic growth during the late 1980s and early 1990s increased the demand for electricity, but

BOX 6.3**Brazil: No Rain or Privatization Gains**

Brazil's experience illustrates that the specifics of each country's situation should guide whether to include privatization in the reform strategy. Brazil faced an acute power shortage during 2002–03 despite reforms that began in the 1990s, including privatizing some of its generation. Like many countries, Brazil had underinvested in capacity for decades: annual investment had declined steadily from a 1982 peak of \$12 billion to \$3 billion by 1999 although demand continued to grow with the economy.

Brazil was heavily influenced by the British model of separating distribution and transmission from generation, which would then be privatized. Unlike the United Kingdom's, however, Brazil's generation is predominantly hydroelectric. The massive costs of dams are incurred upfront (and are sunk), and the running (marginal) costs are negligible. And in Brazil, even the long-run average costs of power are lower than even those of combined-cycle gas turbines, because the gas network and market are not well developed and the sunk costs of the dam are not fully included.

Multiuse dams further complicate the functioning of competitive, privately owned generation. Rainfall fluctuations and the need to maintain adequate water reserves for irrigation and water uses other than electricity require basinwide coordination between water

management authorities and power dispatch. Furthermore, if hydro is used to satisfy peak, as opposed to base-load, demand—and it is difficult to forecast how much this demand will be (especially when rainfall also fluctuates year to year)—it is very difficult to price power correctly. Spot markets for electricity will not clear supply and demand and simultaneously provide investors with adequate returns.

These difficulties with hydro power inevitably also spill over into nonhydro generation. Even if combined-cycle gas turbines were economical for peak provision, or coal-fired generators for base load, the presence of a large hydro system with unpredictable rainfall would make them unremunerative without special payments for their role as emergency capacity or reserve. If such capacity were privately owned, rules that determine such transfers would be important and would be influenced by rainfall.

Hence the private ownership of generation in Brazil brought few gains, and endless disputes with private investors. The situation would differ if dams' sole use were for electricity (as in Norway), or if the cost of thermal plants determined electricity prices (as in Chile and Argentina). While dams may be privately owned, the efficiency gains in Brazil are greater during their construction than in operation.

central governments were unable to finance the needed physical infrastructure investments. So the single state-owned utilities signed purchase agreements with independent power producers, typically contracted in dollars with government guarantees, since default proceedings against a state-owned utility were often not allowed.

At first the stratagem seemed successful: South-east Asia attracted \$65 billion in transactions for the private provision of infrastructure between 1990 and 1997—more than half the total for all developing countries and substantially more than

the other major destination, Latin America (with \$45 billion).

But the Asian crisis in 1997 caused GDP, electricity demand, and the currencies' value in foreign exchange markets to fall. In Indonesia, electricity prices doubled in local currency under the PPAs, but state utilities did not pass the increase on to final consumers. So the power purchasers could not honor the PPAs, and even the government guarantee could not be honored because of the effects of the crisis on the balance of payments and the government budget. There were strong pressures to

TABLE 6.4

Market Shares of the Three Largest Generation, Transmission, and Distribution Companies in Various Countries, 2000

(percent)

Country	Generation	Transmission	Distribution
Argentina	30	80	50
Bolivia	70	100	70
Brazil	40	60	40
Chile	67	100	50
Colombia	50	100	60
Czech Republic	71	100	49
El Salvador	83	100	88
Hungary	74	100	65
Indonesia	100	100	100
Malaysia	62	100	97
Pakistan	95	100	100
Panama	82	100	100
Peru	100	100	100
Poland	45	100	21
Thailand	100	100	100

Source: Jamasb 2002.

renege on, delay, or renegotiate PPAs, resulting in protracted and acrimonious disputes, especially when allegations of corruption surfaced (box 6.4).

Although power-purchase agreements create the same type of liabilities as foreign debts, these liabilities were not explicitly recognized even when governments guaranteed them. Furthermore, such contracts did not address the underlying problem of electricity tariffs not reflecting cost; if anything, the currency crisis made the gap worse. Promoting rapid investment in an unreformed electricity sector by offering independent power producers long-term PPAs with state-owned, single-buyer utilities involves substantial risks both to the investors and to the public interest, and investors often exact a substantial premium for the risks they incur. Hence such contracts are rarely cheap even if they are entered into competitively. They are an expensive way to expand capacity quickly.

BOX 6.4

Controversial Power Purchases in Indonesia

Before 1990, the budget (oil revenues) and development assistance funded power investments in Indonesia. The private sector played only a small role. The power company (*Perusahaan Listrik Negara* or PLN) was an integrated, state-owned firm with problems typical of such entities. In the mid- to late 1980s, a shortfall in oil revenues made the lure of private investments in generation (funded by export credits) irresistible. In 1990, Indonesia needed an estimated 12,000 megawatts of additional capacity by 2000, implying a need for investment of about \$20 billion.

With such needs, PLN embarked on a vigorous expansion, entering what has been termed “a gold rush for the invited elite and their foreign partners.”* Between 1990 when the first IPP project was solicited and 1997 when the East Asian crisis broke, PLN signed 26 power-purchase agreements and energy-sales contracts covering 10,800 megawatts for some \$13 billion. The terms appeared very favorable to the investors, many of whom sought these concessions with a well-connected local partner that opened doors in exchange for an equity stake (that the foreign investor often financed): the tariffs were in the 5.7–8 cent/kilowatt-hour range, well above the prevailing average tariff, with “take or pay” clauses that shifted most risks to the purchasing utility.

* World Bank 2003c. This report focuses more on the absence of accountability and reports more on egregious skimming of contracts by the well-connected than on the underlying problems of the sector.

Transport

In many segments of the transport sector (rail, ports, trucking, airlines, interurban busing), the pressures of inter- and intramodal competition are sufficient in most countries to justify substantial liberalization and privatization. It is difficult for regulators or service providers to predict what are efficient and market-responsive vertical relationships and combinations of logistical roles among various rail entities, truckers, barge operators, port operators, air carriers, warehouses, forwarders, and so forth.

Experience confirms what theory predicts: markets freed from excessive regulatory controls find efficient and innovative ways to serve transport needs. It is important to distinguish transport *services*, which are generally competitive or contestable, from physical infrastructure *facilities*, which may have natural monopoly characteristics. The case for privatizing transport infrastructure is less compelling than that for services. Rail track, basic and access port infrastructure, and certain portions of airport facilities, where monopoly is unavoidable or substantial amounts of sunk capital are involved, must be regulated or even operated by the public sector.

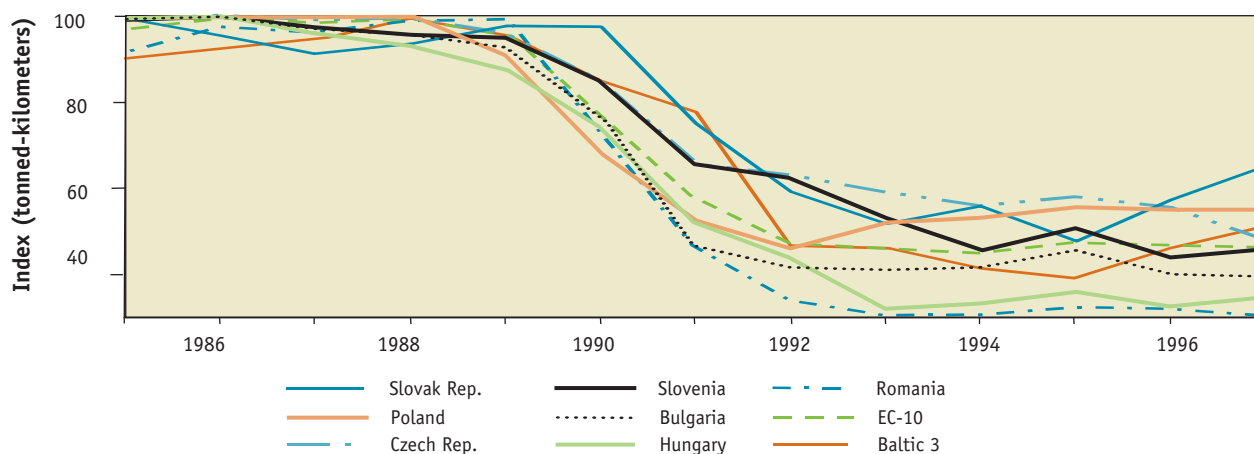
Reforming rail regulation. Railroads have been in decline since the early 1950s in almost all countries; but better regulation has revived them when and where they are economical. Figure 6.7 shows the decline in Eastern Europe, but the U.S. experience points to ways in which their potential could be realized.

Railroads lost their historical dominance as carriers of high-value freight because of poor service and unreliability. Passenger traffic switched to roads and air. Misguided regulatory policies exacerbated the problems of the rail industry. Pricing restrictions and cross-subsidies from freight to passengers accelerated the loss of rail's freight market-share to trucking. The combination of public ownership and exclusive monopoly dulled incentives to control costs. Railroad productivity has been especially poor relative to latent technological opportunities.

In the United States, regulatory reform freed the industry from many arcane and ruinous rules. The 1980 Staggers Act substantially deregulated the railroads, allowing pricing flexibility and the abandonment of unproductive and redundant track. The effects were dramatic: productivity gains exceeded those in nearly every other U.S. industry. From

FIGURE 6.7

Railroad Cargo in the Transformation Period, 1985–97



Source: von Hirschhausen and Meinhart 2001.

1981 through 2000, labor and locomotive productivity increased by 317 and 121 percent, respectively. Lower rail rates—down 59 percent, on average, in real terms from 1981 to 2000—have saved shippers and their customers more than \$10 billion annually. After decades of steady decline, rail market share (measured in ton-miles) has trended slowly upward, from 35.2 percent in 1978 to more than 40 percent today.

Nor was the United States an isolated case: Japanese National Railways began its restructuring in 1986. In the early 1990s, British Rail was split vertically and horizontally (box 6.5). The British government subsequently privatized the freight businesses and the entire infrastructure and competitively awarded several franchises in the passenger segment.

In developing countries, virtually all the rail systems were owned by the state at the beginning of the 1990s, but private operators obtained concessions in most Latin American and several African countries.

The gains from privatizing railroads depend on the manner of regulation. There will be no gains if private operators are as constrained as their state-owned predecessors.

A country can choose from a continuum of ownership and market structure reform options, but the choice should be based on many country- and industry-specific characteristics: size, level of development, institutional capacity, density of the rail network, condition of fixed rail facilities, strength of intermodal competition, and efficacy of public finances. Thus an uncritical choice, especially of the extreme options (entirely private or public, complete vertical integration or separation), does not serve the public interest.

Toll roads. Private sector participation in toll roads increased dramatically during the 1990s. About \$61 billion of private investment was committed to 279 such projects between 1990 and 1999 in 26 developing countries. Many of these projects, however, encountered difficulties and were either renegotiated or canceled: of the 279, 21 projects in Hungary, Indonesia, Mexico, and Thailand,

BOX 6.5

Problems with Unbundling in Railroads

The United Kingdom separated the ownership of infrastructure (track) and operations (trains) to permit competition among rail operators without the need for regulation; but the action gave rise to serious coordination problems, loss of economies of scope, and unnecessary transaction costs.

Many innovative rail services require specific investment in infrastructure (for example, constructing loading and transshipment facilities, building spur tracks to reach a shipper's location), and operators find it difficult and inefficient to coordinate this work with the infrastructure owner, especially if their investment incentives are poorly designed. This is what happened when the British railway system was vertically unbundled and the core infrastructure was transferred to a privatized company, Railtrack plc. The operating companies and Railtrack frequently disagreed on the type, magnitude, and timing of needed track repairs. A frequent complaint was that Railtrack focused too much on commercial concerns and not nearly enough on engineering: so the tracks were not properly maintained, leading to breakdowns that interrupted operator service, jeopardized safety, and prompted public complaints.

accounting for \$9.5 billion in total private investment, were taken over by governments.

More than a third of the canceled projects were part of the Mexican toll-road program. The Mexican toll roads were built on the basis of very optimistic traffic projections—especially regarding the price elasticity of users' demand, which is relatively

difficult to predict. The tolls that were needed to cover project costs drove much of the traffic on to parallel, nontoll roads with the result that revenue was inadequate to service the debts incurred (from government-owned development banks). The government therefore took over the project and lowered the tolls.

The Mexican failure, as does the France-U.K. Channel tunnel, illustrates an inherent difficulty with some types of infrastructure projects: that the state cannot avoid certain types of risks, regardless of the clauses in the contract. Once built, the marginal cost of allowing additional users is low until the point of congestion, but if the toll charged is low, to allow for optimal use, it cannot cover a project's average costs. Alternatives determine the price charged—Mexican law requires nontoll alternative roads, and the Channel tunnel faces competition from ferries—and these prices result in financial losses that are often borne by taxpayers because of their sheer size. Even if lenders were not state-owned banks (as with Mexican toll roads) or pension funds (with government standing behind them), assets of this size and no alternative use should not be allowed to rust and decay, and governments should open their purses to put them to their intended use.

Inaccurate projections of demand (especially of the cross-elasticity of demand) create serious problems that compound the underlying difficulty of most infrastructure projects. Rather than handing over a project entirely, it may be better to involve the private sector in some aspects of the project, such as the construction phase of roads (if the quality could be specified, monitored, and verified) or the collection of tolls (where new scanning technology to pay could be used). Private participation is also easier with projects, such as road bridges or ring roads, where substitutes are few and where less elastic demand allows full cost recovery.

Water

The scope for introducing competition in the supply of water and sewerage services is much more limited than that in the other network utilities.

Local networks of pipes and sewers remain the quintessential natural monopolies. Moreover, unbundling is not as attractive because the benefits resulting from increased competition in supply are likely to be considerably less than in other network utilities. The costs of producing water are relatively low in relation to the value added at the transport stage, although this relationship may vary across countries. The opportunities for introducing competition in sewage treatment, on the other hand, are of greater significance. Overall, franchising is likely to be the most effective way of increasing competition in the sector.

Technological change in water supply systems. A significant difference between the water sector and most other infrastructure is that technological change in the past couple of decades has been much less dramatic or rapid and has had less impact on the underlying economics of supply. The most significant technological innovation in conventional water systems has been the widespread introduction of metering at the point of consumption, which permits the utility to set a tariff reflecting the marginal cost of water used and to bill for actual consumption.

Difficult political economy. Part of the reason why the water sector is behind electricity, telecoms, or transport in restructuring or privatization is that in many countries the political economy of water has not been highly favorable to reform. Major water reforms have tended to be provoked by public health crises, and to some extent by declining real water revenues owing to inflation—factors that led to reforms in Buenos Aires, Lima, Conakry, Santiago, and Mexico City in the late 1980s and early 1990s.

The reforms in these cities depended on the relative political power of potential winners and losers, not on social benefits. The political benefits may come from expanded service to the unconnected population, typically the urban poor, and from better service to middle-income groups. But vested interests include those consumers who already have access and stand to be charged more, workers with patronage employment in publicly owned utilities, and the lucrative businesses that provide services inefficiently (for instance private trucks that haul

water in Indian cities). Water sector reforms have been politically most difficult to sustain in cities where the marginal supply price of water is increasing steeply and where wastewater creates large externalities—such as Lima and Mexico City. In Buenos Aires, by contrast, the lower cost (and bids that reflected this) of renewable water resources have made it possible to reduce water prices and still generate enough return to attract private investment.

Reform outcomes. After a few years of reform (1988–93) in six cities, the initial results showed improvements in the coverage indicators (except in Lima), often dramatically (Abidjan and Conakry). Unaccounted-for water—a measure combining physical losses due to poor maintenance and commercial losses due to poor financial management or illegal use—fell significantly in Buenos Aires, Lima, and Santiago. Financial performance and labor productivity improved, and revenues exceeded costs in all cases except Mexico City (figure 6.8).

Nevertheless, the well-publicized problems with the Cochabamba concession in Bolivia underscore the unpopularity of such reforms (especially price increases) and reveal the deep distrust with which

the private sector is viewed, especially when there are nontransparent deals with poorly overseen governments. Such opposition is less likely if the public realizes that, regardless of whether the provider is public or private, costs must be covered—if not through prices, then through subsidies that many governments cannot afford, and that the alternative to higher prices is having no piped water at all.

Utility Regulation: Some Lessons of Experience

Privatization makes good regulation both more important (because private owners care for profits, even at the public's expense) and more difficult (because firms have a greater incentive and ability to misrepresent costs and market conditions). The recent experience in some countries shows that better regulation is possible though not inevitable. Three lessons emerge.

1. Regulatory Reform Should Promote Competition, Not Control

Improving regulations has traditionally meant giving greater legal powers to regulators, perhaps training them and trying to make them independent of politics. Absolute regulatory independence is neither feasible nor desirable. Regulators will always report to politicians who pass the laws, and politics will always play a role in what is regulated and how.

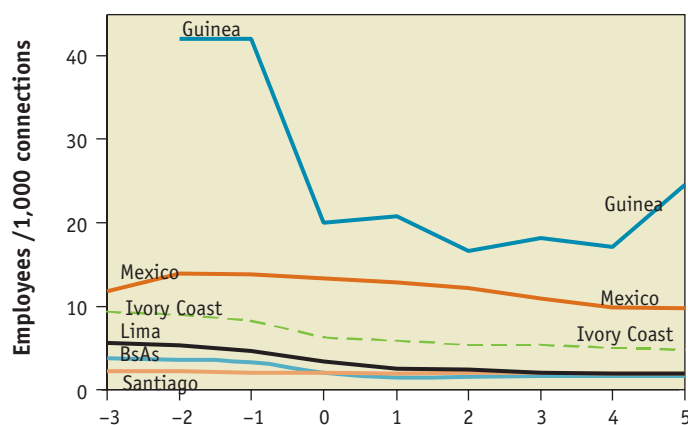
Regulation should promote competition and ensure access to bottleneck facilities, not attempt to control a firm. Information asymmetries and regulatory capture make attempts at control counterproductive. Competition is the most effective regulator, and regulatory reform implies focusing on ensuring competition and access to physical infrastructure.

Ensuring competition implies allowing entry, a goal that unbundling services sometimes helps to advance, although experience shows how coordination problems arise when the effort is overdone. Attempts to control prices are invariably distorting, especially with rapidly changing technology and privatization of parts of the infrastructure system.

FIGURE 6.8

Labor Productivity

(year of reform= 0)



Source: Shirley and Menard 2002.

BsAs, Buenos Aires.

The importance of ensuring access is illustrated in figure 6.9, which compares several Latin American countries that opened their telecommunications markets to private competition. No new entrants gained more than 15 percent of the market, even in Chile, where they operated for more than 20 years, because regulators were unable to ensure access to bottleneck telecommunications facilities (such as the local loop).

Even under technically competent regulators, regulatory interventions often fail. It is ironic that when the World Bank and other multilateral institutions helped developing countries set up regulatory agencies they gave considerable attention to the organization and legal independence of these agencies but not to their mandate: many operate without any controlling principles. Their present structure accentuates the tendency to expand regulatory jurisdiction, often with dysfunctional consequences.

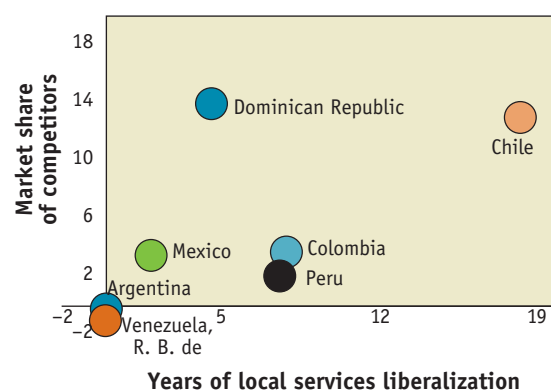
India's experience illustrates the difficulties in staffing a regulatory agency (box 6.6), even in a country with considerable administrative abilities and a vast pool of competent potential staff.

2. Regulatory Reform Should Focus on Getting the Underlying Economics Right

Understanding the source of benefits helps in structuring reform. A pricing policy that does not allow

FIGURE 6.9

Local Exchange Carriers in Latin America



Source: Pyramind 2001.

BOX 6.6

India's Regulatory Capacity versus Effectiveness.

India's power sector is overseen by states, but its regulatory problems do not stem from center-state jurisdictional issues. As in the United States, India's 1998 reforms created independent electricity regulatory commissions in each state, with the Central Electricity Regulatory Commission (CERC) dealing with national and interstate issues (for example, the National Electricity Grid Code). The State Electricity Regulatory Commission (SERC) sets tariffs, enforces licensing conditions, and monitors compliance.

To ensure the independence of these commissions, their mandate to protect the public interest is clearly defined and members have reasonable job security (they cannot be dismissed unless impeached for unethical conduct). With funding coming through special provisions in the consolidated central and state budgets, the commissions are freed from the Ministry of Power's direct financial control.

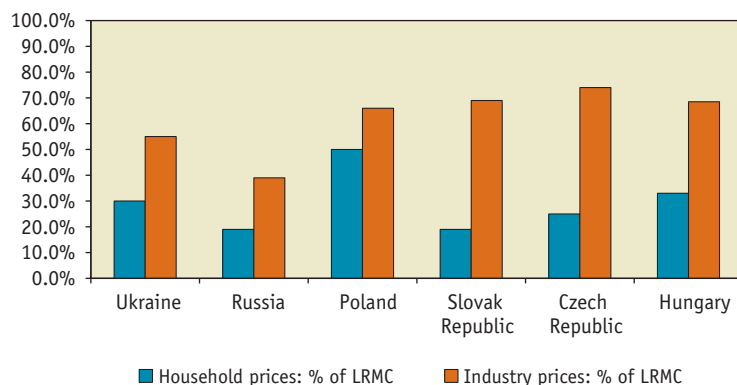
Nevertheless, a recent review of state and central electricity regulators showed inadequate staffing, which sharply limited regulatory capabilities (Prayas Energy Group 2003). CERC and most of the SERCs (Orissa and Andhra Pradesh are possible exceptions) could not fill their specialist positions. Government pay scales are insufficient to attract capable professionals, and requests for professional and technical staff appointments are routinely delayed for months or years. All but two SERCs had only three or fewer professional and technical staff when they were supposed to have 8 to 10, and 8 of the 12 SERCs studied had no permanent professional and technical staff at all. They often relied on temporary staff from the incumbent utilities they were ostensibly regulating.

adequate revenue cannot improve the situation, no matter if the industry is privatized or an independent regulator is established. For example, as of 2000, in almost all Commonwealth of Independent States (CIS) countries, household electricity prices covered less than 50 percent and industrial prices less than 70 percent of the long-run marginal costs of supply (figure 6.10).

Similarly, imposing social service obligations on only some providers will not promote efficient investment, even when institutional mechanisms provide a credible commitment to policy stability.

FIGURE 6.10

Cost-Coverage Ratios of Electricity Prices in the CIS Countries



Source: von Hirschhausen and Opitz 2001.

LRMC. Long-run marginal cost.

Neglecting the underlying economics is also why social security reform has gone astray: there are some risks that the private sector simply cannot handle adequately. While some governments may find it difficult to socialize these risks adequately, it is a mistake to think that they could be borne by the private sector. Despite potential gains from others sharing these risks, they may have to be borne by individuals until better institutions develop.

3. Regulatory Structures Should Reflect Country Differences

Countries differ greatly in their economic structures and in their institutions. These institutional differences—including courts (where appeals are made), legislatures (where laws are passed), the press (which informs the electorate), an engaged public (demanding more from governments), academia (training regulators and encouraging studies of problems)—determine why what is sound regulation in one country is ineffectual in another.²⁴

Although countries can learn from the mistakes of others, important differences among them make it hard to replicate others' successes. Countries often adopt regulatory reforms in name but not in sub-

stance, to satisfy international agencies that sometimes require this reform as a condition for aid or loans. Developing countries looked to the experience of Canada, New Zealand, the United Kingdom, and the United States in formulating their regulations, often ignoring their big differences from those countries.²⁵ Rash attempts to regulate can be far more dangerous and costly than inaction. There is good reason to be concerned that regulations could thwart competition, not promote it.²⁶

5. Privatizing Social Security

Several countries, primarily in Latin America and Eastern Europe, reformed their social security systems by moving to a multipillar system and giving a prominent role to privately managed individual accounts. We describe their experiences, after defining key terms in pensions and social security (box 6.7).

Three Pillars for Stability?

Countries sought to reform social security for different reasons. Chile's privatization of parts of its social security system attracted many imitators in Latin America and Eastern Europe, and the World Bank provided a three-pillar model of pension reform in an influential report, *Averting the Old Age Crisis* (1994a). The experience of the 12 Latin American and 8 East European countries,²⁷ however, calls into question the universal applicability of this model.

Each pillar of the three-pillar model is best described by its function, since the method of financing and determining benefits can differ. The first pillar seeks to prevent old-age poverty, usually through a defined-benefit PAYG pension. All countries with social security systems have this pillar, and in many it is the only one. The second pillar aims to smooth consumption over the life cycle and prevent a dramatic decrease in income during retirement. Consumption smoothing requires retirement payments linked to previous income, so this pillar tends to be a fully funded,²⁸ defined-contribution

BOX 6.7**Definitions**

A **pension** is deferred compensation that employers pay. As employers, some governments have long provided pensions for civil servants and military veterans and their widows and orphans, but very few firms did so until well into the 20th century. Banks were an exception, perhaps to avert malfeasance (bankers making bad loans before they retired). Pension coverage in private firms rose in the United States during the 1930s and further during World War II, perhaps to circumvent wage controls. The expansion coincided with increasingly progressive income tax rates, and spreading income over a lifetime reduced the total taxes paid.

Pensions are of two types: a *defined-benefit* scheme specifies the amounts (generally related to years of service and the last few years' salary) while a *defined-contribution* scheme invests employees' (and employers' matching) contributions and links the payouts to the investment value. Funds are generally set aside in both types of schemes; but employers bear the investment risk in defined-benefit schemes and employees decide the investment allocation and bear the risk in defined-contribution schemes. Defined-contribution schemes are more portable, allowing employees to change jobs without worrying about qualifying for or losing pension eligibility, and are displacing defined-benefit schemes in many countries.

Social security also grew in the 20th century. Some governments began paying the elderly, not just their former employees, but required the recipients to have worked and earned in order to qualify, thereby giving such transfers pension-like features. Social security payments are often based on need, capped to favor the non-rich, and only loosely tied to wages/earnings, giving them safety net-type features. Social security began as a pay-as-you-go (PAYG) system, either unfunded or with partial funding, with payroll taxes usually financing payouts. Rising prosperity made for increasingly generous systems, and greater mobility and declining ties to the

extended family and community made social security a safety net that the public valued.

In most OECD countries, problems with social security have arisen because of demographic changes. Increased longevity and declining fertility led to an increase in the proportion of the elderly in the population, meaning that fewer workers had to support more pensioners. This imbalance required either a reduction in benefits or an increase in tax rates (coverage was already almost universal) or a delay in retirement age or some combination of the three. Alternatively, the projected shortfalls could be funded* (by moving from a PAYG scheme to generating a cash flow surplus). But projections are error-prone, depending not just on demography but also on economic growth, and many governments, including those of the United States, have been reluctant to set aside as much as was needed. Often, they spent even those funds.

Many developing countries, especially in Latin America, introduced social security early in the 20th century, but they generally limited coverage to government employees and the unionized formal sector—a small fraction of the labor force. Unlike those of OECD countries with aging populations, developing countries' social security problems do not arise from demography—half the population consists of children who will soon enter the labor force—but from poorly defined and enforced eligibility rules and overly generous payments. The high tax rates encourage evasion not just from coverage but from the formal sector altogether: many employees work in smaller businesses that remain in, or migrate to, the informal economy.

The situation is different in the transition countries of Eastern Europe.** The demography and benefit coverage are similar to those of OECD countries, but the massive decline in output (outlined in Country Note E on Eastern Europe's Transition) and the difficulties in administering taxes made it difficult for governments to honor their promises to the unemployed, the

(Box continues on the following page.)

BOX 6.7**(continued)**

retirees, and the elderly. Their solution was to cap benefits or build up pension arrears in the first instance and to then cut costs in a variety of ways: increasing contribution rates, raising the retirement age, or experimenting with different forms of indexing benefits.

*“Funding” (by generating a surplus that is invested *before* the “demographic bulge” retires) requires a country to save in the aggregate, which it can do only by running a current-account surplus. Barr (2000) points out that many discussions make this fallacy of composition, and several countries seeking to reform social security run current account deficits that prevent funding.

** China’s demography differs from both Latin America and the Caribbean and Eastern Europe, and its social security system covers about 18 percent of the population. But the immediate problem seems to be clarifying whose liabilities these are: while they are being transferred from the enterprises to the government, it is not clear which level of government will ultimately be responsible, and how intergovernmental transfers will take place.

pension. Funding purports to protect against demographic changes and insulate recipients from the vagaries of budget appropriations. The third pillar augments income in old age and is essentially a voluntary savings scheme for retirement, often with tax advantages. A need-based cash-transfer system financed by general (not wage) taxes is sometimes called a zero pillar.

The 1990s Reforms

Most of the social security reforms of the 1990s took place in Latin America and Eastern Europe, but the two regions differ starkly. Latin America’s large young population contrasts with the higher proportion of the aged in Europe (figure 6.11).

Social security coverage is low in Latin America, but almost universal in Eastern Europe. Fiscal sustainability is a concern for both regions, though par-

ticularly acute in Eastern Europe (figures 6.12 and 6.13). Reforms in the two regions erected the second and third pillars. Many Latin American countries sought to phase out the first pillar completely, thereby privatizing social security. But most governments in Europe and Central Asia (except Kazakhstan) retained at least a small first pillar, not only because of their legacy of protecting the aged but also because of concerns about the future. Many of these countries seek membership in the European Union, and for labor to move freely within the European Union, the social protection systems of its members should be compatible. Most EU countries provide the first pillar, although harmonizing their systems does not appear to be a high priority, and bilateral agreements among EU members govern workers moving from member country to another.

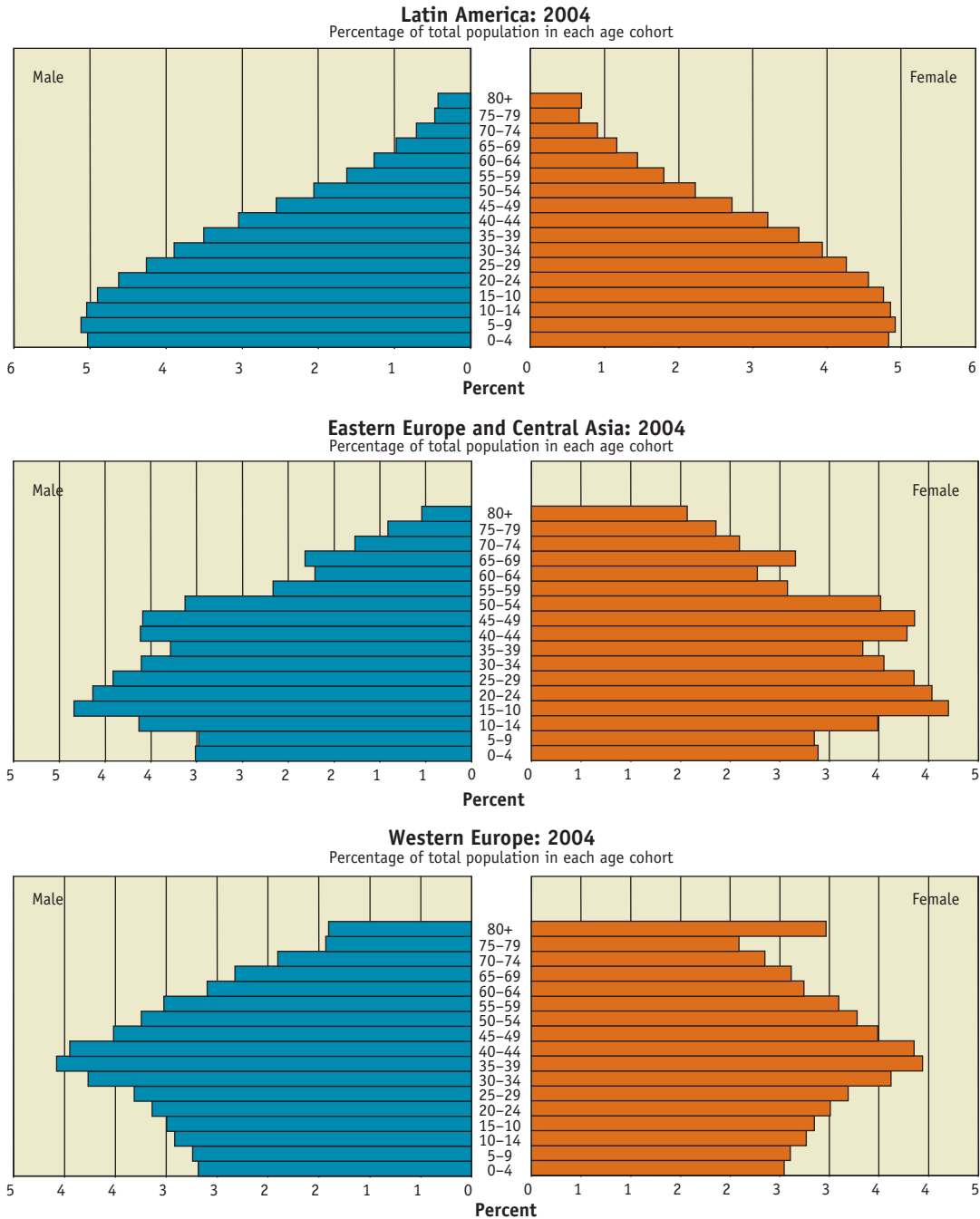
Pensions and social security are long-term contracts, and any change involves an extended transition. In Latin American countries, covered workers were given a short period in which to choose between a reduced first pillar (a defined-benefit pension in what remained of the pay-as-you-go system) or a new second pillar with the privately managed individual accounts that were being established. The third pillar allowed, but did not mandate, additional savings with tax advantages. In Latin America, new entrants to the system were only offered the second and third pillars: thus, once workers who were already covered retired and died, the system would be completely private.

Results

Figure 6.14 shows how the reforms reduced the governments’ projected liabilities, but the transition was unexpectedly costly.²⁹ In Argentina and Bolivia, a poorly managed switchover increased payouts by more than expected because of fraudulent claims and a lax interpretation of the rules. Figure 6.15 shows that Bolivia’s budget deficit rose instead of falling. The transition costs were also high in Eastern Europe because the newly created private sector evaded the taxes when rates were high to finance both the first-pillar payouts and the second pillar’s funding.

FIGURE 6.11

Eastern Europe's Population Is Significantly Older than Latin America's

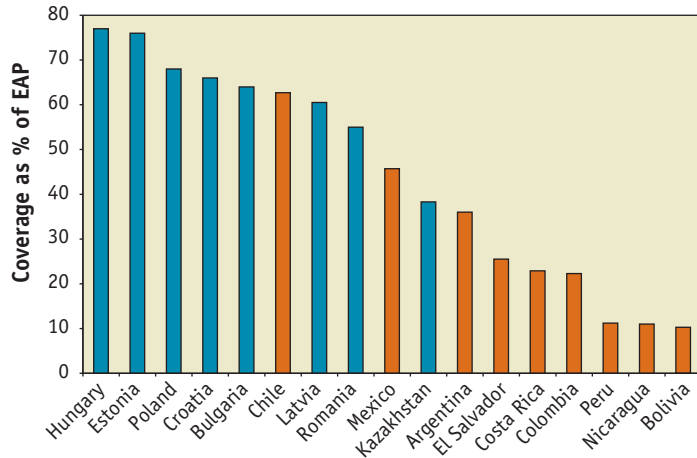


Source: U.S. Census Bureau, International Programs Center.

<Q? X-axis numbering on bottom two charts correct?>

FIGURE 6.12

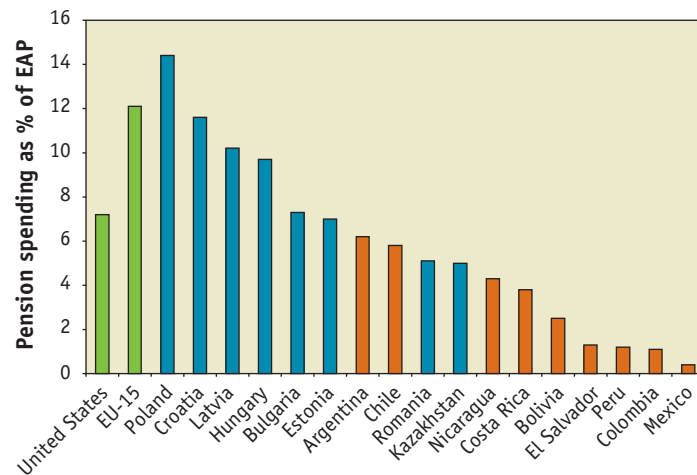
Coverage is Greater in Europe and Central Asia than Latin America and the Caribbean, but Intraregional Variation is Wide



Sources: Palacios and Pallares-Mirallas (2000) for Europe and Central Asia; recent household surveys for Latin America and the Caribbean.

FIGURE 6.13

Eastern Europe Has Greater Fiscal Need for Reform than Latin America



Sources: Palacios and Pallares-Mirallas (2000).

There were other disappointments too. Despite the reforms, coverage remains low in Latin America, notwithstanding predictions that a closer link between contributions and benefits in a funded system would improve incentives to participate (figure 6.16). It is unclear whether this is because workers mistrust social security or simply evade the payroll tax.

Capital markets did not develop either, contrary to predictions.³⁰ Pension funds have simply held government bonds, not commercial paper or equities. Perhaps this development should not be surprising since equity markets require the principal-agent problem to be effectively overcome—which usually takes much longer than the accumulation of funds. But placing government bonds in captive funds does not create a market. Mandating private savings have led to more, and occasionally better, financial sector and capital market regulations. Countries that run a current account surplus could invest in foreign markets; but most developing countries run current account deficits.

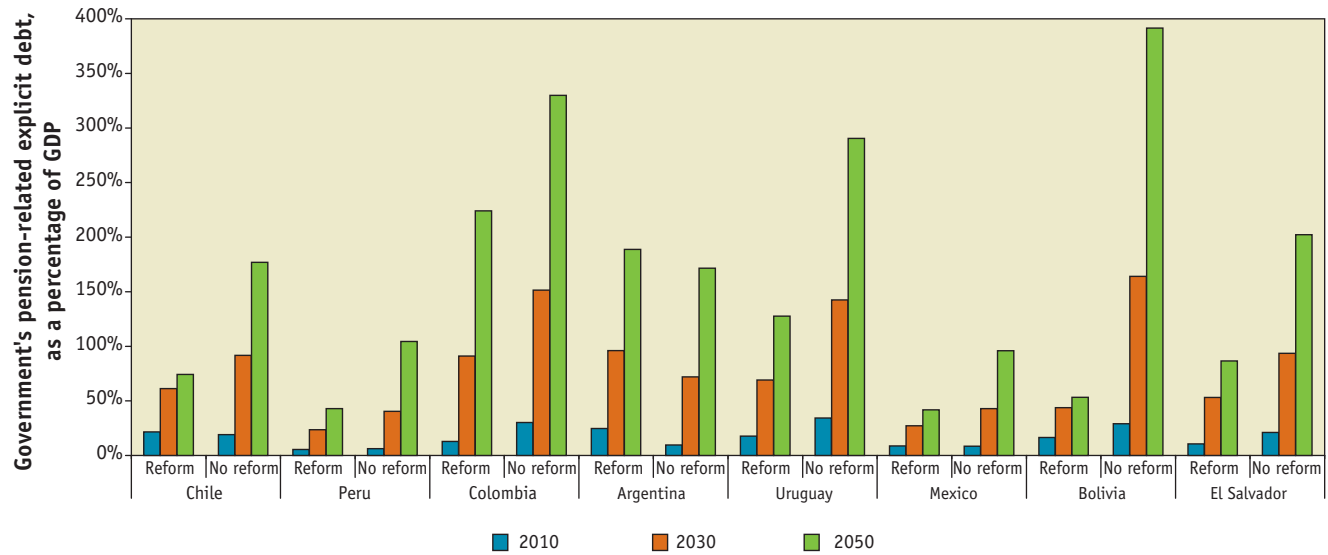
Surprisingly, private pension funds proved more expensive to administer than the previous state-run systems. Although private competition was expected to reduce administrative costs, these costs increased in Latin America as part of the transition from centralized to decentralized management in an industry with possible scale economies. Even in Eastern Europe, where centralized records were maintained for the privately managed funds, charges have been comparable to those in decentralized Latin American systems. Moreover, private fund managers could collude since they were few and entry was difficult. Regulation did not focus on ensuring competition, and rents to incumbents came at workers' expense.

Government's Role in Pension Systems

Although privatization is often appealing, governments have a necessary role in pension systems. People can save for old age (to smooth consumption) in a variety of different ways, including investing in their children and buying real estate or claims on other assets, but these choices are limited in many

FIGURE 6.14

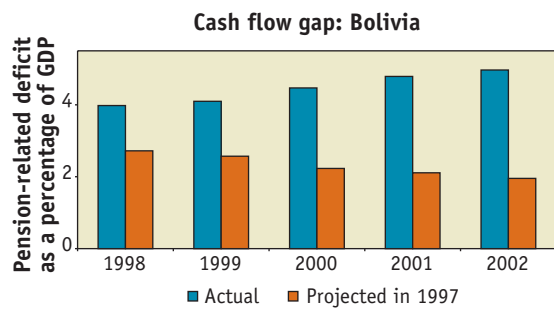
Reforms in Latin America Reduced Debt: Projected Pension Debt (Explicitly Accumulated after 2001)



Source: Gill et al. 2004.

FIGURE 6.15

Bolivia's Pension Reform Was Unexpectedly Costly

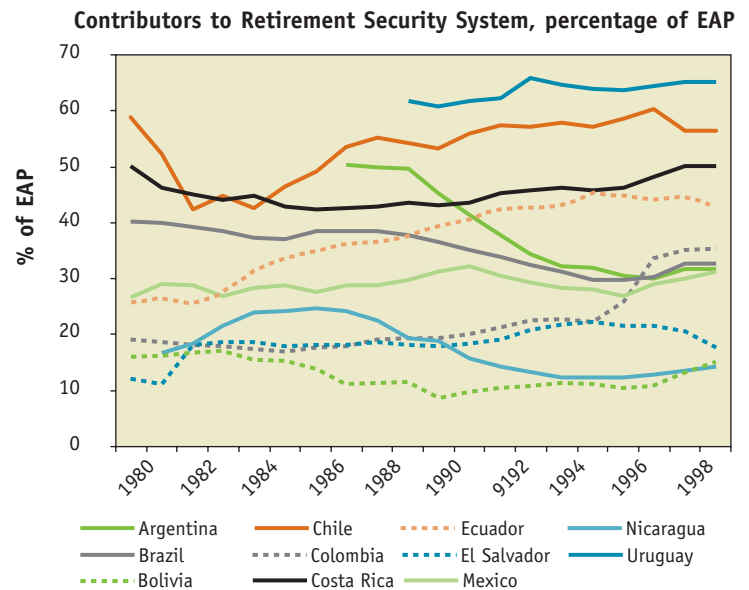


Source: Gill, Packard, and Yermo 2004.

countries. People may be unable to diversify against catastrophes such as droughts or famines, especially if all members of their family and community are affected. Besides, community and family ties fray with urbanization and economic development. The question is whether governments or markets can

FIGURE 6.16

No Marked Rise in Participation in Latin America



Source: Gill, Packard, and Yermo 2004.

protect against such risks better than personal and/or private initiatives.

The government may have a role in keeping the elderly out of poverty, especially as societies prosper. Since private markets to insure against poverty may not develop because of adverse selection and moral hazard, the government essentially provides this insurance through the first pillar.

Though insurance markets develop to pool the risk of infrequent large but predictable losses from, say, fire and automobile accidents, other losses are better managed through prevention and self-insurance (Ehrlich and Becker 1972). Old age is predictable and self-insurance means saving. Governments have a clear role in enforcing contracts for savings and investment vehicles, but it is less clear why the second pillar should be mandated, if this forces savings through a poorly developed financial system. In many developing countries, relying on investments in a family business, or in children, may be a better choice for all concerned.

The third pillar may not be necessary but, as it is voluntary, it is not harmful. It should be viewed in conjunction with the tax system. The tax break for such savings tends to move the tax system from taxing (realized) income to taxing consumption—a shift that economists since Kaldor (1955) have long favored.

The experiences of Latin America and Eastern Europe differ greatly, but common lessons emerge. The multipillar model may be suitable for some countries, but clearly not for all. Latin America's experience shows that the problems in the first pillar—that is, a need-based pension to the aged—cannot be solved by simply adding additional pillars, or by switching from a pay-as-you-go to a funded system. In Argentina the default on government bonds have essentially destroyed the second pillar, which was meant to replace the first (box 6.8). A government cannot resolve the fiscal implications arising from the first pillar by “privatizing” it: a better choice may be to scale back the benefits, administer it well, and ensure that it is financially sound.

Whether a second pillar (mandated individual accounts) is advantageous depends on a country's

BOX 6.8

Argentina: Private Accounts Do Not Protect Workers from Government Risk

Privately administered mandatory individual retirement accounts were thought to protect workers against political interference inherent in a public PAYG system; but the 2001 crisis in Argentina showed otherwise.

Argentina's private pension system was vulnerable even before the 2001 crisis. Since the system began in 1994, nearly half the assets were invested in government bonds, making pensions vulnerable to the government's fiscal problems. Indeed, converting implicit PAYG government liabilities into explicit debt (having a funded system) contributed significantly to Argentina's declining fiscal position: the bonds benefited from high interest rates, but this gain increased the overall fiscal deficit.

Argentina's return to the *peso* and the default on its debts left pensioners in the lurch. The events of 2001–02 so eroded confidence in any mandated retirement system that participation in any system will likely suffer.

Source: Rofman 2002.

circumstances. Financial markets are not equally developed in all countries, and the second pillar may be unsuitable and administratively costly in many. Government bonds will likely remain the main asset in such funds, meaning that the second pillar, like the first, will rely on the promises of a financially strapped government. The government will always have a role in any mandated pillar, and without competition, “private provision” may merely be an expensive decoration.

Many transitions have proved unexpectedly expensive because of fraud and poor administration of the rules. Governments should be especially wary with social security and pension reforms, because mistakes are difficult to undo. Those with an existing system may be better advised to keep it simple and make it sound than to add pillars on a shaky fiscal foundation. Countries without social security should be especially wary about introducing such measures, because once established, a pension system cannot be easily dismantled.

6. Conclusions

The 1990s experience shows how difficult both privatization and regulation are. There is no universally appropriate reform model. Every restructuring and privatization program needs to consider explicitly the underlying economic attributes and technology of each sector and its institutional, social, and political characteristics.

Clear gains have followed the privatization of nonutilities (with the possible exception of large extractive industries), suggesting that privatization of such firms would be beneficial in all countries, although the benefits are greater when institutions exist that help markets function. With extractive firms and utilities (or with social security), the government will play a role through taxes or regulatory controls, and the benefits from their privatization will depend greatly on how effectively this is done.

Privatization is less about finding better owners than the government than it is about separating commerce from politics. Government ownership does not blur this distinction in OECD countries as much as in developing countries where oversight over governments is weaker. Privatization helps to achieve the separation but does not automatically ensure it, because governments retain other powers they could abuse and, without institutions to check such conduct, still influence firms they do not own. The transition countries' experience shows that market-supporting institutions do not emerge quickly in response to demand. And in infrastructure utilities

the commercial cannot be separated from the political, regardless of the adequacy of institutions.

If privatization is oversold as a means of separating commerce from politics, restoring the link through regulation is underappreciated. There are huge potential gains from privatizing infrastructure, but inappropriate regulation has sometimes prevented these from being realized. In particular, when prices are controlled at levels that do not cover costs, owners will not invest in new capacity. Regulation must also respond to technical changes, which make today's sensible regulation distorting tomorrow. California's misadventures in electricity show how even sophisticated regulators can make mistakes that leave the public confused about what really happened. And in countries where the public already distrusts markets, privatization bears the opprobrium.

Experience shows that it is possible for regulation to focus less on control than on ensuring access to bottleneck facilities and encouraging competition and entry, in turn encouraging innovation. Redirecting regulation in this manner requires a good understanding of technology and economics. It also calls for modesty, especially in settings where politics can undercut regulators' competence.

In social security, privatization has not eliminated the government's role, and administrative costs have sometimes increased. The purpose and nature of such contracts may always require government involvement. Changes in these arrangements have large consequences that are difficult to reverse.

Notes

1. The Tennessee Valley Authority was an exception; it promoted rural electrification to tackle poverty in the depressed Appalachian region.
2. Kahn (2004) reflects on and summarizes the deregulation of airline and telecommunications industries and the current controversies (such as the Baby Bells being allowed into the long-distance market).
3. In 1984, the privatization of British Telecom was the largest stock market flotation ever.
4. The (West) German government sold a majority stake to the public in Volkswagen in 1961 and in VEBA (a major energy/industrial corporation in Germany), but

- later bailed out shareholders when stock prices collapsed. German banks rather than individuals or mutual funds own most industrial equity. Similarly, there was modest privatization in France during the 1980s, but not on the same scale as in Britain.
5. Nellis (2003b) summarizes the many descriptions and studies of Latin America's privatization.
 6. Nellis and Shirley (1991).
 7. *World Development Report 2003* covers the role of the private sector in the provision of many services that governments traditionally provide and are not discussed here. This chapter focuses primarily on privatization in the transition economies and the regulation of utilities, not changes in the various agricultural marketing boards (primarily in Africa) or the deregulation of nonutilities in developing countries.
 8. See Country Note E, "Eastern Europe's Transition: Building Institutions."
 9. Even human capital could be considered state-owned since wages were administratively set, migration was restricted, and the choice of professions was constrained. The freeing of wages and other restrictions implicitly meant that this capital was restituted to individuals.
 10. The specifics differed by country, but an account of Russian privatization by Boycko, Shleifer, and Vishny (1996), who were advisors to the privatization agency—with its elements of political intrigue, clash of personalities, and the need to make important decisions quickly without adequate information—would resonate with anyone who worked in transition countries at the time.
 11. More was done to establish stock exchanges than to establish institutions protecting property rights. More was done to pass new laws than to help courts function better.
 12. Some of the least market-oriented countries avidly passed such laws, so the few times they were used were to shake down efficient firms that increased their market shares.
 13. Kogot and Spicer (2002) describe how the small group of influential economists were unaware or dismissive of the work of political scientists, many of whom were knowledgeable about the countries. Dani Rodrik (2003c) makes a similar point in <http://ksghome.harvard.edu/~drodrik.academic.ksg/Stiglitzconference.notes.pdf>.
 14. Claessens, Djankov, and Klingebiel (2001) offer a bleak outlook for equity markets and suggest that efforts are better directed at improving creditor protection.
 15. Some did so for fallacious reasons. Lieberman and Nellis (1994) provided a premature endorsement of Russian experiments with vouchers, arguing that vouchers give the public purchasing power. Ramachandran (1997) sought to dispel some of the many fallacies that arose by pointing out that vouchers cannot provide purchasing power or be inflationary, and that their main advantage was to effectively reduce the "minimum value" that governments often placed that would have prevented their sale.
 16. Although the privatization agencies disbanded, their employees often found work in the securities and exchange commissions that were created (and later atrophied when trading volumes could not justify their continuation).
 17. Little empirical work has been done on this. When valued at the secondary market price for vouchers, a mere \$40 million could have bought all firms in Georgia in 1994.
 18. Copper prices fell from \$7,000 a tonne in 1996 to \$3,000 in the mid-1990s to about \$1,500 in the early 2000s. Production had fallen from its peak of about 800,000 tonnes of finished copper a year to under 300,000 tonnes.
 19. Anglo-American headed the consortium through its subsidiary, Zambia Copper Investments, which held 65 percent of the shares. ZCCM Holdings had 20 percent, IFC took a 7.5 percent stake, and the Commonwealth Development Corporation took the remaining 7.5 percent, while the Government of Zambia held a golden share.
 20. Konkola Copper Mine's December 2003 statement to the Extractive Industries Evaluation (describing efforts to find alternative employment and activities for the affected miners).
 21. *World Development Report 1996: From Plan to Market* concluded that "the Czech Republic's mass privatization program has been the most successful to date."
 22. Except for the loans-for-shares scheme in Russia where major assets were practically given away to a cabal of cronies.
 23. Some 48 contracts worth \$24 billion (that is, 1.9 percent by number and 3.2 percent by value) were canceled, a third of them dealing with the Mexican toll road program. Water and sanitation had higher cancellation rates than telecom or ports.
 24. Analogously, the performance of state-owned firms is disappointing in some countries (India, Mexico) but not in others (Sweden, France).
 25. Sophisticated rate-of-return rules are meaningless if firms do not keep accounts adequately, and recourse to courts for remedies may not be possible. Some notable examples include the adoption of the quasi-judicial U.S. model for telecommunications and energy in the Philippines, a country with a notoriously weak judiciary, where reform led to regulatory failure; and the adoption of a U.S.-style Public Utility Commission in Jamaica, where without the constitutional protections and administrative due process prevalent in the United

- States, the result was regulatory instability and the nationalization of telecommunications in 1975.
26. The World Bank's recent *Doing Business 2004: Understanding Regulation* report shows that the biggest and most common mistake is to regulate too much, and to do so poorly.
 27. Chile pioneered the multipillar system in 1981. The system was adopted (with its many variants) during the 1990s by seven countries in Latin America and the Caribbean (Peru, Colombia, Argentina, Uruguay, Mexico, Bolivia, and El Salvador) and three in Europe and Central Asia (Hungary, Poland, and Kazakhstan). Costa Rica, the Dominican Republic, Latvia, Romania, Bulgaria, Croatia, and Estonia adopted it in the 2000s, and Nicaragua and Ecuador plan to do so.
 28. Several countries provide some form of minimum pension guarantee to the funded pillars, however, adding a defined benefit component to an otherwise defined contribution pension.
 29. This section is based on Gill et al. (2004). Lindemann, Rutkowski, and Sluchynskyy (2000); Kritzer (2001); and World Bank (2003a) describe the experience in Europe and Central Asia.
 30. For further discussion, see chapter 7, section 2.

