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Privatization in Development

Some Lessons from Experience

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Abstract

This paper briefly reviews the main theories of state versus private ownership and empirical evidence on the impact of privatization in developing countries (including transition economies). The paper draws some lessons for policy and offers some suggestions on how to assess privatization, at least in countries where there is still scope for it. The paper suggests that although understanding of the efficiency gains of privatization has increased significantly in recent years, there is an important area about which little is known: the distributional effects of privatization. Whether

arguing from the standpoint of welfare economics or political economy, distributional effects are critical to the outcome, or the perceived outcome, of privatization. Thus, there is a need to fully evaluate the ex ante and ex post impacts of privatization, the most effective types of regulation and ownership regimes, and the way in which losers, when there are any, can be compensated. This is a need that must be met by academics and development agencies, including the World Bank and regional development banks.

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Privatization in Development: Some Lessons from Experience

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I.   Introduction

The role of the private sector in development cannot be addressed fully without discussing privatization—the process whereby an activity is shifted from the state, mainly state-owned enterprises (SOEs), to the private sector.[1] The conventional wisdom is that privatization should increase the efficiency of the economy because private firms are effective cost minimizers and profit maximizers, whereas SOEs often face soft budget constraints and engage in objectives other than cost minimization, such as implementing the state's social welfare policies.

The efficiency argument for privatization is voiced at times with exceeding forcefulness by some economists. Not a long time ago, a Nobel laureate in economics attending a conference on growth and development concluded his presentation on growth strategies with this simple recommendation: "In order to grow, in order to develop, you need to do three things: liberalize, stabilize, and privatize."

In this paper we briefly review what is known about privatization in developing countries (including transition economies) in order to draw some lessons for policy and to offer some suggestions on how to assess privatization, at least in countries where there is still scope for it. We will show that the prescription for achieving growth and development is not as simple as the recommendation of the Nobel laureate.

It is true that our understanding of the efficiency gains of privatization has increased significantly in recent years, but there is an important area about which we know little: the distributional effects of privatization. Whether we are arguing from the standpoint of welfare economics or of political economy, distributional effects are critical to the outcome, or the perceived outcome, of privatization. Indeed, it is possible that much of the attitude of the public toward privatization might be linked to distributional effects that are not being well captured in our current analysis.

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[1] The state may be the central government or local governments.

Figure 1 shows indexes of dissatisfaction with privatization in Latin America for the years 1998 and 2005 as reported by Latinobarómetro, an annual public opinion survey carried out in 18 countries in the region. The poll asked the public in several Latin American countries whether privatization had been beneficial for the country. As early as 1998, negative opinions about privatization averaged 40 percent, and seven years after privatization had peaked in the region, more than 60 percent of respondents in all reporting countries expressed negative views.[2]

If we believe that the efficiency argument is so strong, why are there such high levels of negative opinion about the benefits of privatization? That is the central question of this paper.

In what follows, we first describe the trends in privatization in developing countries and the indicators used to measure the extent of privatization. Next, we briefly discuss the economic theory behind privatization. We do not attempt a comprehensive review; there are many good and exhaustive books on this topic, chief among them those by the distinguished late Jean-Jacques Laffont and his colleague Jean Tirole. Rather, we simply illustrate a few basic points concerning the economics of privatization. We then present empirical evidence on the main effects of privatization and, finally, draw conclusions.

II.   Trends in Privatization in Developing Countries

Since the 1984 privatization of British Telecom, developed and developing countries have adopted privatization programs to different extents. To date, almost every developing country has divested some SOEs to the private sector; cumulative proceeds raised by privatizations during the period 1988–2005 approach US$530 billion in constant 2000 U.S. dollars.

Considering first the two most widely used indicators, proceeds and number of deals, we see that privatization started slowly in the 1980s, with fewer than 89 transactions per year and proceeds of less than US$4.0 billion. Two decades after the privatization of British Telecom, however, proceeds approached US$56 billion per year, and the number of transactions had increased to about 200 per year. During those two decades, developing countries witnessed various waves of privatization.

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[2] These years were chosen simply because 1998 was the peak year of the second and last big wave of privatization in Latin America and 2005 is the most recent year for which information on attitudes toward privatization is available in Latinobarómetro.

From the standpoint of proceeds from privatization, three waves can be identified: from 1990 to 1994, from 1996 to 2002, and starting in 2003 (Figure 2, top panel). But when the focus is on the number of deals (transactions), the situation is different. There was only one big wave, in the mid-1990s, and it was driven mostly by the privatization process in Europe and Central Asia (Figure 2, bottom panel). A comparison of the proceeds from privatization and the numbers of deals shows that the average size of privatization operations has increased substantially over the years. In 1995 the average size of a privatization was rather small, at US$40 million, but by 2005 the average was US$290 million. Proceeds from privatization and the number of deals are neither sufficient nor informative enough as indicators of the extent of privatization. For a better and more complete picture, indicators that relate privatization to the size of the economy, as measured by gross domestic product (GDP), aggregate capital stock, or the importance of public enterprises in the economy, would be more valuable.

Figure 3 shows the proceeds from privatization as a share of GDP in three world regions. In Latin America and the Caribbean two waves of comparable importance are evident, in the early 1990s and in the late 1990s. Among the countries responsible for those big waves are Mexico, where the proceeds from privatization represented 3.6 percent of GDP in 1991, and Brazil, with 4.1 percent of GDP in 1998. Thus, the privatization process in Latin America and the Caribbean during the 1990s was rather sizable. The Europe and Central Asia region exhibits more peaks and troughs than other regions in proceeds as a share of GDP, and until recently, the size of the proceeds was below Latin American levels. But the 2000s have witnessed a radical change in the latter indicator, with accumulated proceeds during the period 1988–2005 approaching US$150 billion in constant 2000 US dollars, against US$223 billion for Latin America and the Caribbean. Finally, in East Asia and the Pacific proceeds from privatization have been generally low as a share of GDP.

In assessing the potential role of privatization, what matters most is the relative sizes of the private and public sectors and the structural change attributable to privatization. Accordingly, it is useful to analyze not only the annual flows of privatization proceeds but also the cumulative flows, as illustrated by Figure 4. The accumulated proceeds from privatization in Europe and Central Asia for the period 1988 to 2005 came to about 16 percent of 2000 GDP, equivalent to around 5 percent of productive assets in those countries (assuming a capital-output ratio of about

3). In Latin America and the Caribbean the accumulated proceeds amounted to about 11 percent of 2000 GDP, or close to 4 percent of productive assets. Keeping in mind that privately operated assets are more productive than publicly operated assets, the contribution of the privatization process to GDP growth, in static terms, has been substantial. For instance, on the assumption that the productivity of assets is twice as high when they are privately operated than when they are publicly managed, privatization in Latin America and the Caribbean contributed about a quarter of a percentage point annually to growth, which is not negligible. In East Asia, South Asia, and Sub-Saharan Africa the intensity of privatization has been much less and may have contributed, at most, 0.1 percent of growth during this period.

The dominant sectors for privatization during the period 1988-2005 were infrastructure, finance, and energy. This is important because later we argue that these sectors are probably less competitive than the manufacturing sectors, with important implications for the impact of privatization.

Although we do not have reliable information on the size of the public sector at each point of time, we do have some data gathered by the World Bank in the mid-1990s on the share of SOE activity in GDP and the share of SOEs' investment in gross domestic investment (GDI). These data, combined with the figures on accumulated proceeds as a share of GDP, provide a more complete picture of the extent of privatization in a sample of countries over the last 15 years. In Argentina, for instance, SOE activity was about 3 percent of GDP in 1990, as shown in Figure 5, and the accumulated proceeds from privatization for the period 1988–2005 were about 14 percent of 2000 GDP. Using a capital-output ratio of roughly 3, one can conjecture that in a country such as Argentina, privatization of the economy has basically been completed. In India, by contrast, the assets that have been privatized are small in comparison with the share of SOEs in GDP in 1993, and so the scope for privatization there is still rather large. The same can be said of China and many African countries, such as Côte d'Ivoire.[3] So, privatization is not an issue that belongs to the past and it is all the more important to understand how best to privatize in countries where there is still scope for it.

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[3] Although we lack information on the share of SOEs in GDP in China, it does not seem unreasonable to assume that it should be about half their share in GDI. Then SOEs would still be responsible for 10 percent of GDP in 1997; privatization might have reduced that share by roughly 2 percent since then.

III.   The Simple Economics of Privatization

We begin this section with a brief review of the main theories of state versus private ownership. Next, a simple example is presented to illustrate the trade-offs that policy makers face when considering privatization, in particular with respect to distributional issues. The main conclusion of this discussion is that theory alone is unlikely to yield a definitive answer about the merits (or shortcomings) of privatization. The type of private ownership to emerge after privatization, the characteristics of the product market (competitive or noncompetitive), the method of privatization, and other considerations will determine the overall outcome of privatization.

There is a huge theoretical literature on public versus private ownership and management. For the most part, the debate concerning the role of SOEs has been framed according to three views. The *social view* sees SOEs as institutions created by a social welfare–maximizing government to resolve actual or perceived market failures; whereas private firms maximize profits, SOEs maximize broader social objectives (Atkinson and Stiglitz 1980). The *agency view* also assumes that governments seek to maximize social welfare but focuses on the discrepancy between the objectives of managers (the agents) and of owners (the principals) within the two ownership regimes. SOE managers, confronted with weak incentives compared with those facing private firms, will channel resources to socially profitable activities but will expend less effort (or divert more resources) than their private counterparts.[4] This view concludes that, given the differences in incentives associated with public or private ownership, overall social welfare should depend on the trade-off between internal economic efficiency (under private ownership) and allocative efficiency (under public ownership); see Alchian (1965); Vickers and Yarrow (1988, 1991); Shapiro and Willig (1990); Laffont and Tirole (1993). Finally, the *political-economy view* suggests that SOEs represent a mechanism for pursuing the individual goals of politicians, such as maximizing employment or financing favored enterprises. Accordingly, SOEs are inefficient because of the deliberate policy of transferring resources to their supporters (Shleifer and Vishny 1994; Shleifer 1998).

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[4] In private firms the discrepancy among objectives is reduced by the threat of takeover and bankruptcy, a managerial labor market, and the existence of ownership rights that allow the principals to sell the firm if they are not satisfied with managerial performance.

A textbook example will help illustrate these issues, as well as others that are intrinsic to the privatization process. Consider the case of a municipality that intends to privatize the provision of clean water. The market for water provision has the characteristics described next.

The quantity, q, of water demanded depends on the price, p, at which it is sold, according to the following demand schedule:

q=100 -0.1p   (1)

The cost, C, of distributing water comprises a fixed cost equal to 1,000 monetary units ($) and the cost of labor. Employment (E) to distribute q units of water is given by:

E = q/λ   (2)

where λ is a productivity parameter. Under these conditions, the total cost of water is:

C = 1,000 + wq/ λ   (3)

where w is the unit cost of labor; w is initially set at $10 and λ at 0.1.

In response to the large fixed cost, significant economies of scale, inelastic demand, and externalities (not taken into account here) involved in the provision of water, it is assumed that water is provided by a SOE that is subsidized by the government. As the first column of Table 1 shows, the subsidy allows the SOE to sell water at a price of $80 (below its marginal cost of $100), but only 85 units of water are provided. The low price and the relatively small quantity imply that some consumers are rationed; at the price of $80, consumers would like to consume 92 units instead of the 85 units offered by the SOE. In this simple example, it is assumed that because of lack of monitoring incentives at the managerial level, workers in the SOE produce only 80 percent of what they would produce otherwise. To produce 85 units of water, the SOE thus employs 1,062.5 labor units instead of 850. At a wage rate of $10, the total wage bill is $10,625. The total amount of government subsidy to the SOE is $4,825 (including fixed costs), and that figure is equal to the SOE loss. The cost for consumers, at least for those who have access to water, is $6,800.

The consumer surplus is a measure of the overall welfare of consumers. It is equal to the price they would be willing to pay for each successive unit of water they consume, up to their

actual consumption, 85 units, minus the actual amount they pay, or $6,800. In this particular case, it is equal to $42,075.5[5]

Assume now that the government decides to privatize water provision. There are many ways to privatize; consider as a starting point a private monopoly that is regulated so that the private company has a cap on the price that it can charge. Assume that the price is set at $120, with the company having the contractual obligation to provide universal service and to distribute all the water that is demanded at the set price. Finally, it is assumed that the private monopoly receives no subsidy for its operation (that is, it has a hard budget constraint). What are the implications of this type of privatization?

The first consequence, as shown in the second column of Table 1, is that the quantity of water supplied increases from 85 to 88 units. Second, at the higher price, the quantity demanded decreases, and there is no rationing, in accordance with the terms of the contract under which the monopoly is regulated. Third, managerial incentives are such that workers devote more effort, and they work now at full productivity. Consequently, employment decreases from 1,062.5 labor units to 880 units, even though output is now larger.[6] Fourth, the government subsidy is zero. Fifth, total expenditures by consumers increase from $6,800 to $10,560. As a consequence, consumer welfare falls to $38,720.

If we compare the two situations, a subsidized SOE and a regulated private monopoly, we find, in the first place, an efficiency gain; the monopoly produces more output with fewer workers (Table 2). The explanation is that the private monopoly is monitoring labor in a more efficient way. There are changes in the distribution of welfare; this outcome is crucial from our viewpoint, as is discussed below, but it has received little attention in the theoretical and empirical literature. Consider the distribution of costs and benefits among agents in this example.

First, the taxpayer gains from the privatization process. The government had been subsidizing the SOE in the amount of $4,825, and now there are no more subsidies. The taxpayer thus gains back the $4,825. (Alternatively, the government can allocate that money to other objectives thought to be valuable to taxpayers.) Second, consumers lose because the price has

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[5] This corresponds to the area below the demand curve at the rationed quantity 85.
[6] We assume that the wage rate is the same, but it might also be allowed to vary.

increased. But the story actually is slightly more complicated; consumers are worse off because of the price increase, but access to water has increased. The disappearance of rationing should contribute positively to consumer welfare, but it is difficult to measure that effect without getting into the details of the rationing scheme. This, again, is an important distributional issue.[7] Third, employees are worse off, in two ways: fewer workers are employed, and workers have to expend more effort working for the private monopoly than when they were working for the subsidized SOE. (This effect is not taken into account in Table 2.) Fourth, business owners, who were not making money in the SOE, are now making a profit of $760. The total gain for the economy from this privatization is thus $405. The important point is that the privatization generates both losers and winners.

To go further we would need to understand better who are the "agents" listed in Table 2. Who are the taxpayers? Are they the same individuals as the consumers? Who are the employees? Are they taxpayers? Are they consumers? Who are the business owners? Are the business owners the taxpayers? And within each group, we would like to know whether the individuals affected by the privatization are poor, members of the middle class, or rich. Who will be protesting in the streets tomorrow against privatization, and who will lobby the government for the privatization to go on? That depends on the answer to all these questions. This is the sort of analysis that is needed in order to evaluate the social welfare impact of privatization while taking its distributional effects fully into account.

In the preceding example, privatization entails a private monopoly with universal service, a price cap, and no subsidy. But privatization can also involve a monopoly that charges a price equal to the marginal cost and receives a subsidy for the amount of the fixed cost. Then the profit of the operator would be zero, and the distributional effects would be completely different. We can also think about unbundling the SOE, with an agent managing the fixed-cost part of the operation and competitive firms sharing the variable cost of the industry. Again, this will lead to different distributional implications.

Thus, theory alone is unlikely to be conclusive about the trade-offs between government and private ownership. All the dimensions discussed above are important, and they should be

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[7] The assumption that all consumers are rationed in the same proportion would make the correction for rationing unnecessary.

taken into account when thinking about privatization. Realistically, what do we know about these factors? In view of the simple example above, there clearly are at least two criteria that should be considered when evaluating privatization: productive efficiency and distributional impact. In the next section, we review some empirical evidence along both dimensions.

IV.   Empirical Evidence

It is surprising that when most of the privatization programs started in the mid-1980s, there were few empirical studies on the impact of privatization on firm performance and welfare distribution, and the existing studies were far from conclusive. Since then, the number of empirical studies has increased and includes privatization programs in different settings—competitive and noncompetitive markets, developed and developing countries, and so on. Yet, as will be seen below, many of these studies still have conceptual and methodological shortcomings.

Conceptual and Methodological Issues

Beyond the usual data and sample size difficulties, assessment of the impact of privatization is plagued with conceptual and methodological issues. First, to assess the impact of a policy change such as privatization, we need a counterfactual; that is, we need to imagine what would have happened in the absence of privatization. This is inevitably problematic. The problems are more pervasive in the case of utilities, where privatization can generate a host of general equilibrium effects, including relative price changes in output markets (tariff rebalancing) and input markets, as well as spillovers to other sectors of the economy.[8] Second, causality is an important issue in assessing the impact of privatization. For example, performance may change because of other events or circumstances contemporaneous with privatization, such as shifts in the macroeconomic environment, regulatory changes, or promotion of competition. This issue is of particular relevance in the assessment of privatization in transition economies. Third, the potential selection bias in the SOEs to be privatized—the endogeneity problem—is

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[8] World Bank (2005) reviews the growth impact of the main policy and institutional reforms introduced in the 1990s including privatization and deregulation.

important. If the allocation of firms for privatization is nonrandom, studies that do not adequately control for endogeneity will be biased.[9]

This section reviews the empirical evidence concerning the impact of privatization on efficiency and welfare distribution and illustrates some of the issues mentioned above with examples drawn from existing empirical studies.

Firm Performance

In the last few years, three excellent surveys reviewing the empirical evidence of privatization on firm performance have been published: Megginson and Netter (2001), Djankov and Murrell (2002), and Estrin et al. (2007). From our perspective, the strength of these surveys in comparison with similar papers is that they review the evidence while giving unique consideration to the methodological problems discussed above.[10]

Megginson and Netter review 38 studies that examine the impact of privatization on the operating efficiency, ownership structure, or financial performance of former SOEs in developed and developing countries (including transition economies), as well as in competitive and noncompetitive markets, mostly utilities. They find that almost all studies of nontransition economies that examine postprivatization changes in output, efficiency, capital investment spending, and profitability document significant increases in these variables and significant decreases in leverage. The studies, however, are less unanimous with respect to the impact of privatization on employment. Some studies find significant increases; others, significant decreases; and still others, insignificant changes in employment following privatization.[11]

A first example to illustrate the empirical evidence concerning the impact of privatization on efficiency is drawn from the wave of privatization of nonfinancial firms in Mexico during the period 1983–91 (La Porta and López-de-Silanes 1999). The authors include in their sample both

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[9] Gupta, Ham, and Svejnar (2000) present evidence of nonrandomness in privatization in the Czech Republic.

[10] Other useful surveys are Kikeri and Nellis (2004) and Shirley and Walsh (2000).

[11] According to Megginson and Netter (2001), the most compelling studies, taking into account sample size, coverage, and methodological rigor, are for nontransition economies: Galal et al. (1994); La Porta and López-de-Silanes (1999); Dewenter and Malatesta (2001); and the three articles summarized in D'Souza and Megginson (1999). For transition economies the best studies (using the above criteria) are Dyck (1997); Weiss and Nikitin (1998); Claessens and Djankov (1999); Lizal, Singer, and Svejnar (2001); and Frydman et al. (1999).

SOEs and a control group of privately owned firms spanning a wide variety of industries and firm sizes, to control for potential biases.

Figure 6 presents four indicators of firm performance: sales per employee, employment, sales, and prices. These indicators are documented for the industry overall and for the competitive and noncompetitive parts of the industry.[12] For all industries, as well as for the competitive and noncompetitive subsectors, privatization has a significant efficiency effect in this sample of Mexican firms. Sales and productivity increase, whereas employment drops. On a different register, prices increase slightly. In agreement with theory, there is almost no price effect for privatized firms in competitive subsectors, but there is a large price effect for privatized firms in noncompetitive sectors. This example illustrates clearly the difference that a competitive environment makes for the effects of privatization.

In their review of the empirical evidence for transition economies, Megginson and Netter distinguish between Central and Eastern Europe and the former Soviet Union (FSU). In Central and Eastern Europe the evidence suggests that private ownership is associated with better firm-level performance and that foreign ownership, where allowed, is associated with greater performance improvement than purely domestic ownership. Majority ownership by outsider (nonemployee) investors is associated with significantly greater improvement than any form of insider control. The key advantage of outside control is the restructuring that takes place at the firm level. The impact of privatization on employment is ambiguous, mainly because employment decreased for almost all firms in transition economies after wide-ranging reforms were initiated.

The authors note that assessing the impact of privatization in the FSU is much more difficult because these republics were under communist control the longest and the transition from a planned economy coincided with the disorders created by the dissolution of the Soviet Union. In addition, at the time of the survey the contraction of output that occurred after 1991 was far greater than anywhere in Eastern Europe, with no upturn in sight. Thus, according to the authors, there is no empirical study of the impact of privatization on performance that is truly

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[12] The definitions of competitive or noncompetitive industries are based on the description of the industry provided in the privatization prospectus.

persuasive from a methodological point of view. That being said, an important result of all the studies is that insider privatization has not been a success in the FSU.

Djankov and Murrell (2002) review the empirical evidence on the effects of privatization on firm performance (productivity, sales, profits, etc.) and on qualitative indicators (wage arrears, creation of new products, and so on) in transition economies.[13] In contrast to Megginson and Netter (2001), they use formal meta-analysis to synthesize the evidence of more than 100 empirical studies instead of relying on a verbal description or an interpretative summary of the studies. From our perspective, one of the most interesting characteristics of this survey is that the methodology can explicitly address the issue of differences in the quality of studies, thereby showing to what extent the conclusions change if greater weight is given to studies that appear methodologically sound. Even so, the meta-analysis echoes in some respect the initial results presented by Megginson and Netter. Djankov and Murrell find that privatization is strongly associated with better performance and with improvements in qualitative indicators of production restructuring. These findings, however, are not statistically significant for firm performance in the countries of the Commonwealth of Independent States (CIS). The results are robust to the use of weights that reflect different attention to selection bias or to the quality of the analysis.

One reason that privatization may have varying effects across regions is that the privatization process has led to different mixes of owners. Djankov and Murrell find that state ownership within traditional state firms has less effect on firm performance than any other ownership regime except worker ownership, which has a negative effect on performance.[14] Privatization to diffuse individual owners has no effect on performance, and privatization to investment funds or foreigners has a large positive effect. Privatization to investment funds is

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[13] Djankov and Murrell (2002) use the term "restructuring measure" to capture both quantitative (performance) and qualitative indicators. Employment is not used as an indicator in their study because of the substantial disagreement in the literature on the impact of privatization on employment.

[14] Djankov and Murrell (2002) use 11 categories of ownership, some of which overlap: (a) traditional state ownership (enterprises that are 100 percent state owned and have not been part of a privatization program); (b) state ownership in enterprises that are treated as private under the corporate governance laws and, usually, have been part of a privatization program; (c) insiders (a composite group that includes both workers and managers); (d) outsiders (a composite group consisting of all nonemployee, nonstate owners); (e) workers; (f) managers; (g) foreign owners of all types; (h) banks, except those included in (g); (i) investment funds, unless ownership of the fund is such that (b), (g), or (h) applies; (j) blockholders, that is, outsider ownership concentrated in the hands of large individual owners, unless the blockholder could be classified under (b) or (f)–(i); and (k) diffuse outsider—the residual outsider ownership category, when outsider owners are not identified as belonging to categories (g)–(j).

five times as productive as that to insiders, and privatization to foreigners or blockholders is three times as productive as privatization to insiders. The effect of different ownership regimes varies among regions.

A second example based on the privatization experience of Central and Eastern Europe illustrates the efficiency impact of privatization. Frydman et al. (1999) draw on firm data from the Czech Republic, Hungary, and Poland for the period 1990–93 and seek to disentangle the efficiency effect of privatization according to type of ownership. Their study is also interesting because it includes a control group (a counterfactual) consisting of firms that were SOEs at the beginning of the period and remained SOEs at the end of the period. The only shortcoming of this work is that no correction has been made for the selectivity of the privatization process. Privatized firms in the sampled countries were not selected randomly. In the countries covered by Frydman et al., privatization improved efficiency when the firms were acquired by outsiders (Figure 7). Revenue increased, and employment did not change, leading to sizable productivity gains. Interestingly, when privatization entailed the transfer of ownership to firm insiders (either the managers or employees working in the SOE before privatization), the impact on efficiency was radically different. Revenue decreased in comparison with the control group, employment increased, leading to a drop in productivity. A possible explanation is that managers and workers of a privatized SOE try to extract more rent from the firm when they are in command.

Finally, the survey by Estrin et al. (2007) addresses more rigorously the issue of selection bias or endogeneity that arises when better firms may have been privatized first in transition economies. The authors present some new results, as they can draw on recent studies in transition economies that employ better methodology, as well as studies for China that were barely reviewed in the two surveys cited above. Broadly, Estrin et al. find that privatization to foreign owners increases efficiency in relation to SOEs, although this result is less clear for China. Domestic private ownership has a positive effect on efficiency in Central and Eastern Europe, but the effect is smaller than that of foreign ownership. Russia seems to be different in that domestic private ownership and mixed ownership have a negative or insignificant effect on efficiency. Worker ownership in Central and Eastern Europe and the CIS, and collective ownership in China, do not seem to have a negative effect relative to other forms of private ownership, unlike the findings in the Djankov and Murrell study. Finally, data from Central and

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Eastern Europe and the CIS suggest that new firms appear to be as productive as or more productive than firms privatized to domestic owners and that foreign start-ups appear to be more efficient than domestic start-ups. Studies of employment find that privatizations in Central and Eastern Europe, the CIS, and China are not associated with reductions in employment.

Finally, it is important to emphasize that the empirical evidence accumulated regarding firm performance is mainly based on data from member countries of the Organisation for Economic Co-operation and Development (OECD), Latin American countries, and economies in transition. The empirical evidence on the effects of privatization in Africa is not as deep and robust as the evidence discussed above. Thus, caution is necessary in generalizing the results presented above to low-income countries or small states.

Distributional Impact

In contrast to the huge number of studies on the impact of privatization on firm performance, relatively few studies analyze the impact on social welfare and its distribution. Moreover, these studies mostly cover OECD and Latin American countries; they focus mainly on the impact of privatization on consumer welfare in the utility sector; and they are less successful in controlling for potential biases. Birdsall and Nellis (2003) review some of this literature. As it is outlined here, our knowledge falls short of what is desirable for adequately assessing the impact of privatization on social welfare.

Galal et al (1994) is the most persuasive of the studies. Its main strength is the construction of a clear counterfactual that allows for the measurement of the financial as well as the welfare impacts of privatization. The authors analyze 12 privatized companies (mostly airlines and regulated utilities) in Chile, Malaysia, Mexico, and the United Kingdom to determine whether the transfer to private ownership increased efficiency and, if so, how the costs and benefits of the adjustment were allocated to government, foreign and domestic buyers, competitors, consumers, and employees. Galal et al. document welfare gains in 11 of the 12 cases analyzed. In no case were workers worse off after privatization, and in three instances they were better off. Although this study is rigorous, it examines only a small number of firms in four countries and does not cover the wider range of aspects described earlier in this paper.

Another study that attempts to shed some light on the implications of privatization for welfare is Ugaz and Waddams Price (2003). In contrast to Galal et al. (1994), this study focuses only on consumer welfare, using household surveys before and after privatization. The seven cases analyzed correspond to utilities in Latin America, Spain, and the United Kingdom and present a mixed picture. They show that prices have often risen as a result of the rebalancing of tariffs after privatization, and this has affected low-income groups more than others. But the study also shows that most companies have extended their coverage (access) so that the poor in developing countries, who initially enjoyed the least coverage, are benefiting the most from this aspect of privatization.

Similar research was carried out for Latin America by the Inter-American Development Bank. The case study presented here is about the privatization of water distribution in two provinces of Bolivia, La Paz–El Alto, and Cochabamba (Barja, McKenzie, and Urquiola 2005). As was seen above, when discussing the simple economics of privatization, the two main determinants of the impact of privatization on consumer welfare are price and access. In the case of Bolivia, the 1997 privatization of water distribution in La Paz and El Alto produced only a slight increase in prices (Figure 8), but in Cochabamba, where privatization took place in 1999, prices increased enormously months later.

To evaluate the welfare impact of privatization on consumers, access needs to be taken into account. Figure 9 shows the impact of privatization on households in La Paz and El Alto according to their initial access to water. The welfare of those households that enjoyed access before privatization did not change much, as prices did not increase substantially. For households that gained access, there was a large positive impact on welfare. If it can be proved that this improved access was caused by privatization, privatization might have had a huge impact on consumer welfare.

In Cochabamba privatization was very short-lived. The privatization took place in October 1999. In March 2000 widespread protests occurred—the so-called Water War—and the government decided to give the water operation back to the original SOE. Barja, McKenzie, and Urquiola (2005) estimated the impact of the price increase on income groups in the population, looking simply at the share of water expenditure in household budgets and calculating how much households would have to pay in addition. Figure 10 shows that the impact of privatization in

Cochabamba was highly regressive, with all deciles losing welfare because of this price effect but with the poorest decile losing much more than the richest decile.

The last example in this discussion is from a well-known study by Galiani, Gertler, and Schargrodsky (2005), who exploited variation in ownership across time and space to identify the causal effect of privatization of water distribution on child mortality in Argentina (Figure 11). From 1993 onward, several municipalities privatized the distribution of water, whereas other municipalities kept their initial arrangement with public companies, either national or local, thus providing a control group, or counterfactual.

The evidence suggests that after 1993 child mortality rates in municipalities with privatized water distribution dropped faster than in those with nonprivatized water distribution. This is an interesting result. If we believe that changes in child mortality are mostly attributable to changes in the subgroups of the population in which child mortality is highest—often, the poorest people—this would mean that the privatization of water in Argentina had a progressive effect. But the difficulty with the approach taken in the paper is that it is a highly reduced form. We do not know through what channels the reduction in the child mortality rate took place. Did it occur because there was better access under privatized water companies? Or was it because the quality of water was better? We do not know. But this certainly is the type of evidence that is needed in order to understand the distributional impact of privatization.

V.   Concluding Remarks

The paucity of full evaluations of privatization operations in developing countries is surprising. There are some analyses of the efficiency gains of privatization, but there is very little assessment of the distributional impact of privatization, and most of the studies that do exist only consider the effect of price changes on consumers. Evaluations of the indirect effects of privatization—for example, the study of child mortality discussed earlier—are much rarer. The complete picture that was described in the analytical section of this paper is simply not available in the empirical analyses. Thus, one important conclusion of this brief review of privatization and development is the need to pursue this type of empirical analysis more exhaustively. If there is scope for privatization in some countries, we need to have more in-depth evaluations to guide our policies.

The efficiency gains of privatization seem warranted in many cases. Moreover, gains in productivity and output do not always imply a loss in employment. There is little doubt that when we consider privatization in a competitive environment, the change is almost certainly positive. The distributional effects, however, are uncertain and opaque. The negative attitude toward privatization in Latin America that was described at the beginning of this paper may well be the result of that opacity. People are preoccupied with the impact on consumers and do not look at taxpayers at all, or they ignore the issue of access, or they simply follow the general negative political discourse against privatization or are concerned with the macroeconomic impact of privatization. This lack of knowledge is not a desirable state of affairs.

Much more remains to be done at this stage toward evaluating the ex ante and ex post impacts of privatization, the most effective types of regulation and ownership regimes, and the way in which losers—when there are any—can be compensated. We have to rely on serious evaluations of different designs for those privatization operations. This is a need that must be met by the community of academics and development agencies, including the World Bank and regional development banks. We should try to exploit all the occasions when those institutions are involved in privatizations to extract the maximum information on the distributional impacts of these operations.

References

Alchian, Armen. 1965. "Some Economics of Property Rights." *Il Politico* 30: 816–29. Reprinted in *Economic Forces at Work*, ed. A. Alchian, 127–49. Indianapolis, IN: Liberty Fund, 1977.

Atkinson, A. B., and Joseph E. Stiglitz. 1980. *Lectures in Public Economics*. New York: McGraw-Hill.

Barja, Gover, David McKenzie, and Miguel Urquiola. 2005. "Capitalization and Privatization in Bolivia: An Approximation to an Evaluation." In *Reality Check: The Distributional Impact of Privatization in Developing Countries*, ed. John Nellis and Nancy Birdsall. Washington, DC: Center for Global Development.

Birdsall, Nancy, and John Nellis. 2003. "Winners and Losers: Assessing the Distributional Impact of Privatization." *World Development* 31 (10): 1617–33.

Claessens, Stijn, and Simeon Djankov. 1999. "Ownership Concentration and Corporate Performance in the Czech Republic." *Journal of Comparative Economics* 27 (3): 498–513.

Dewenter, Kathryn L., and Paul H. Malatesta. 2001. "State-Owned and Privately Owned Firms: An Empirical Analysis of Profitability, Leverage, and Labor Intensity." *American Economic Review* 91(1): 320–34.

Djankov, Simeon, and Peter Murrell. 2002. "Enterprise Restructuring in Transition: A Quantitative Survey." *Journal of Economic Literature* 40 (3, September): 739–92.

D'Souza, Juliet, and William L. Megginson. 1999. "The Financial and Operating Performance of Newly Privatized Firms during the 1990s." *Journal of Finance* 54 (4, August): 1397–1438.

Dyck, I. J. Alexander. 1997. "Privatization in Eastern Germany: Management Selection and Economic Transition." *American Economic Review* 87: 565–97.

Estrin. Saul, Jan Hanousek, Evzen Kočenda, and Jan Svejnar. 2007. "Effects of Privatization and Ownership in Transition Economies." CERGE-EI Discussion Paper 181, Center for Economics Research and Graduate Education, Economics Institute, Prague. Forthcoming in *Journal of Economic Literature.*

Frydman, Roman, Cheryl W. Gray, Marek P. Hessel, and Andrzej Rapaczynski. 1999. "When Does Privatization Work? The Impact of Private Ownership on Corporate Performance in the Transition Economies." *Quarterly Journal of Economics* 114 (4): 1153–91.

Galal, Ahmed, Leroy Jones, Pankaj Tandon, and Ingo Vogelsang. 1994. *Welfare Consequences of Selling Public Enterprises: An Empirical Analysis*. New York, NY: Oxford University Press.

Galiani, Sebastian, Paul Gertler, and Ernesto Schargrodsky, 2005. "Water for Life: The Impact of the Privatization of Water Services on Child Mortality." *Journal of Political Economy* 113 (1): 83–120.

Gupta, Nandini, John C. Ham, and Jan Svejnar. 2000. "Priorities and Sequencing in Privatization: Theory and Evidence from the Czech Republic." Williamson Davidson Institute Working Paper 323, University of Michigan, Ann Arbor.

Kikeri, Sunita, and John Nellis. 2004. "An Assessment of Privatization." *World Bank Research Observer* 19 (1): 87–118.

Kirkpatrick, Colin, David Parker, and Yin-Fang Zhang. 2006. "An Empirical Analysis of State and Private-Sector Provision of Water Services in Africa." *World Bank Economic Review* 20 (1): 143–63.

Laffont, Jean-Jacques, and Jean Tirole. 1993. *A Theory of Incentives in Procurement and Regulation*. Cambridge, MA: MIT Press.

La Porta, Rafael, and Florencio López-de-Silanes. 1999. "The Benefits of Privatization: Evidence from Mexico." *Quarterly Journal of Economics* 114 (4): 1193–1242.

Lizal, Lubomir, Miroslav Singer, and Jan Svejnar. 2001. "Enterprise Breakups and Perfor-mance during the Transition from Plan to Market." *Review of Economics and Statistics* 83 (1): 92–99.

Megginson, William L., and Jeffry M. Netter. 2001. "From State to Market: A Survey of Empirical Studies on Privatization." *Journal of Economic Literature* 39 (2): 321–89.

Shapiro, Carl, and Robert D. Willig. 1990. "Economic Rationales for the Scope of Privatization." In *Political Economy of Public Sector Reform and Privatization*, ed. Ezra Suleiman and John Waterbury, 55–87. Boulder, CO: Westview Press.

Shirley, Mary, and Patrick Walsh. 2000. "Public vs. Private Ownership: The Current State of the Debate." World Bank Policy Research Working Paper 2420, World Bank, Washington, DC.

Shleifer, Andrei. 1998. "State versus Private Ownership." *Journal of Economic Perspectives* 12 (4): 133–50.

Shleifer, Andrei, and Robert W. Vishny. 1994. "Politicians and Firms." *Quarterly Journal of Economics* 109 (4, November): 995–1025.

Ugaz, Cecilia, and Catherine Waddams Price, eds. 2003. *Utility Privatization and Regulation: A Fair Deal for Consumers?* Cheltenham, U.K.: Edward Elgar.

Vickers, John, and George Yarrow. 1988. *Privatization: An Economic Analysis*. Cambridge, MA: MIT Press.

———. 1991. "Economic Perspectives on Privatization." *Journal of Economic Perspectives* 5 (2): 111–32.

Weiss, Andrew, and Georgiy Nikitin. 1998. "Performance of Czech Companies by Ownership Structure." Williamson Davidson Institute Working Paper 186, University of Michigan, Ann Arbor.

World Bank. 2005. *Economic Growth in the 1990s: Learning from a Decade of Reform.* Washington, DC: World Bank.
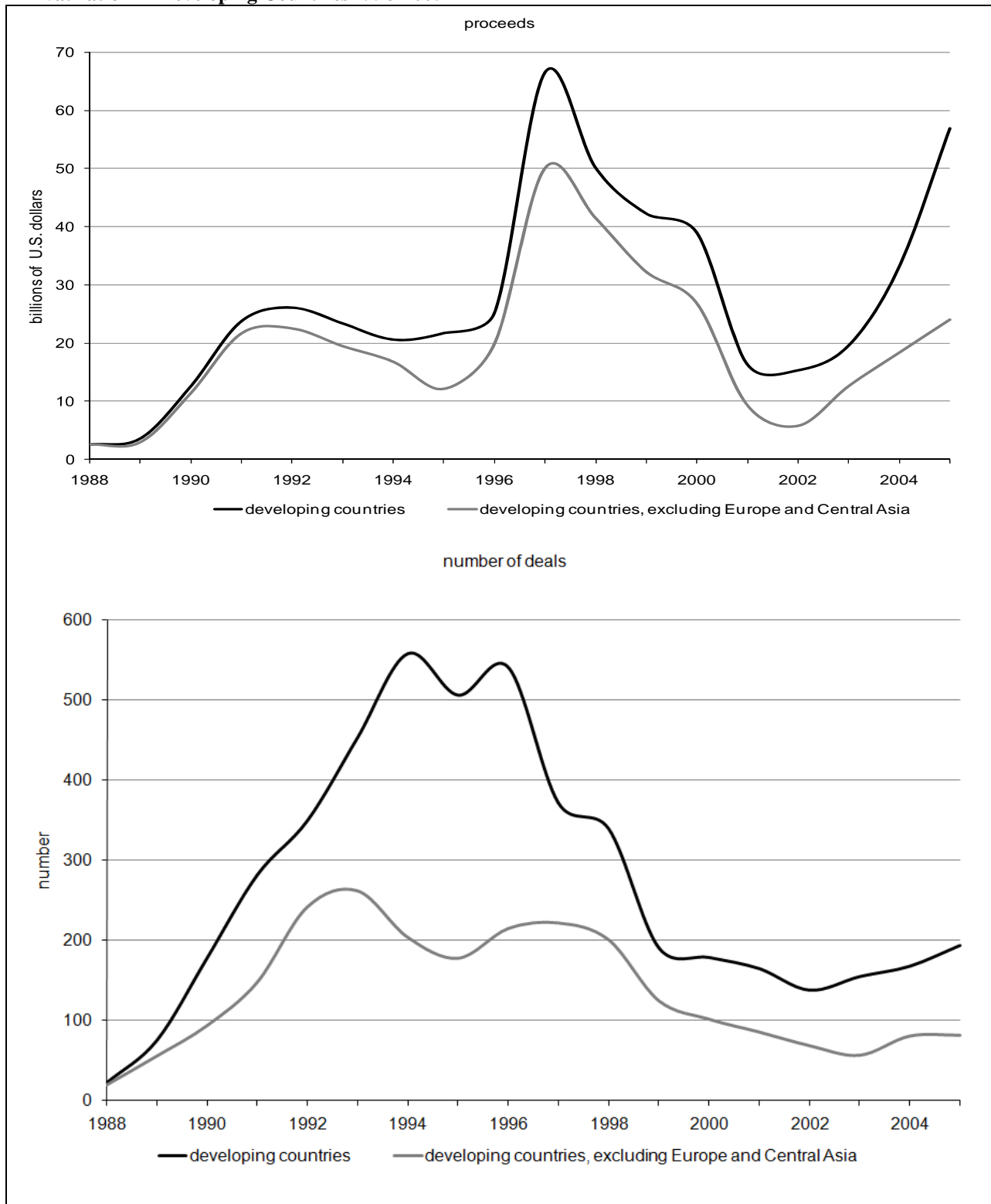
World Bank. Various issues, *World Development Indicators.* Washington, DC: World Bank.

FIGURE 1
Negative Views of Privatization in Latin America, 1998 and 2005
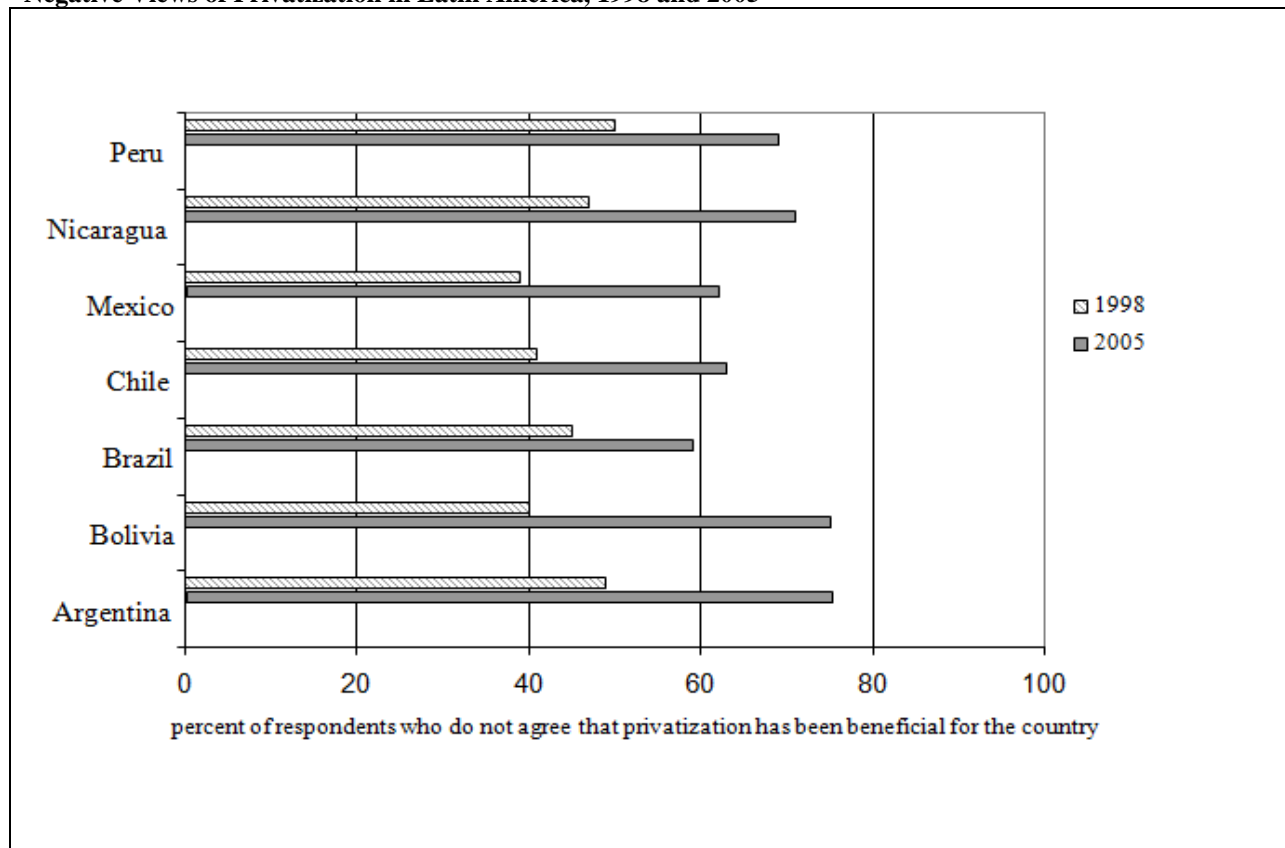
Source: Latinobarómetro.

FIGURE 2
Privatization in Developing Countries 1998-2005

proceeds

number of deals

Source: World Bank Privatization Database, http://rru.worldbank.org/Privatization/.

FIGURE 3
Privatization Proceeds as Share of Regional GDP, by Region, 1988–2005
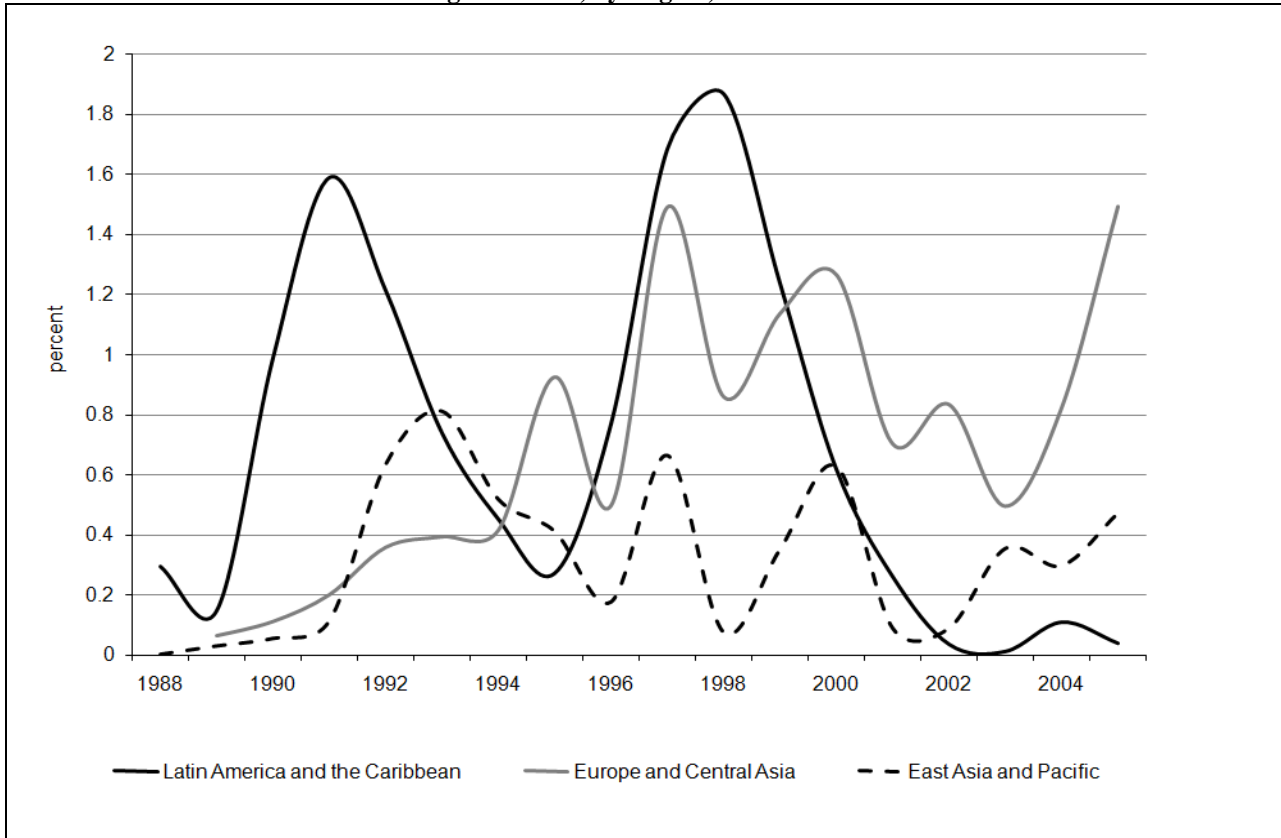
Source: World Bank Privatization Database; World Development Indicators. Note: GDP, gross domestic product.

FIGURE 4
Accumulated Proceeds as Share of 2000 GDP, by Region and Sector, 1988–2005
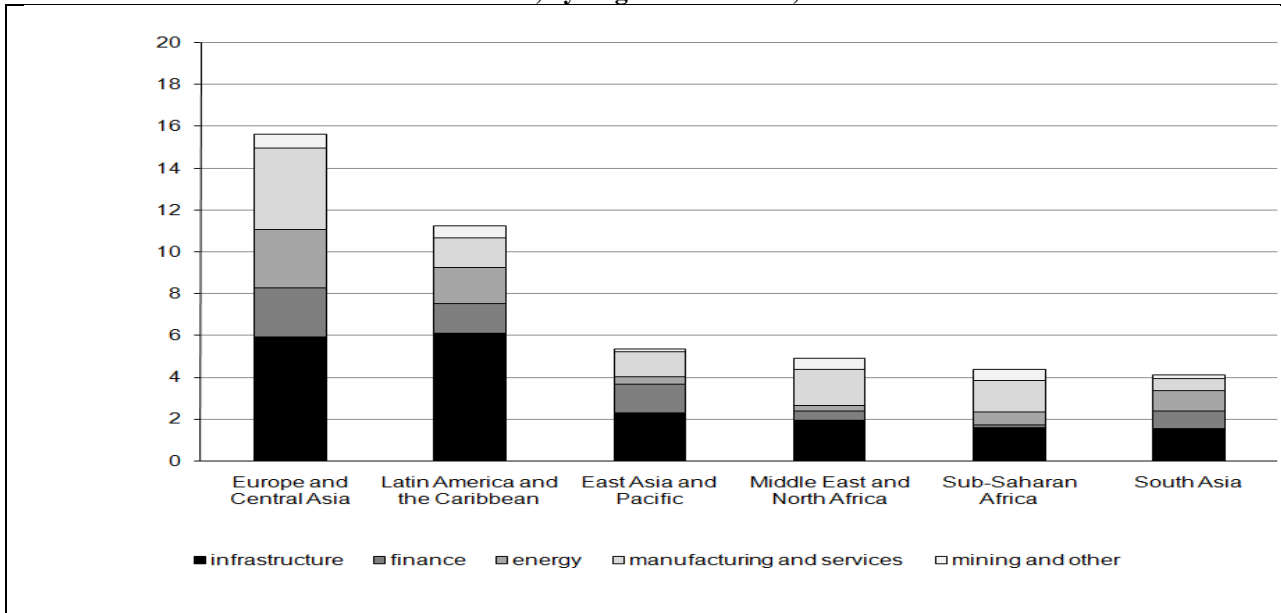
Source: World Bank Privatization Database; World Development Indicators. Note: GDP, gross domestic product.

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FIGURE 5
Privatization Proceeds and the Size of State-Owned Enterprises (SOEs), Selected Countries, 1990s
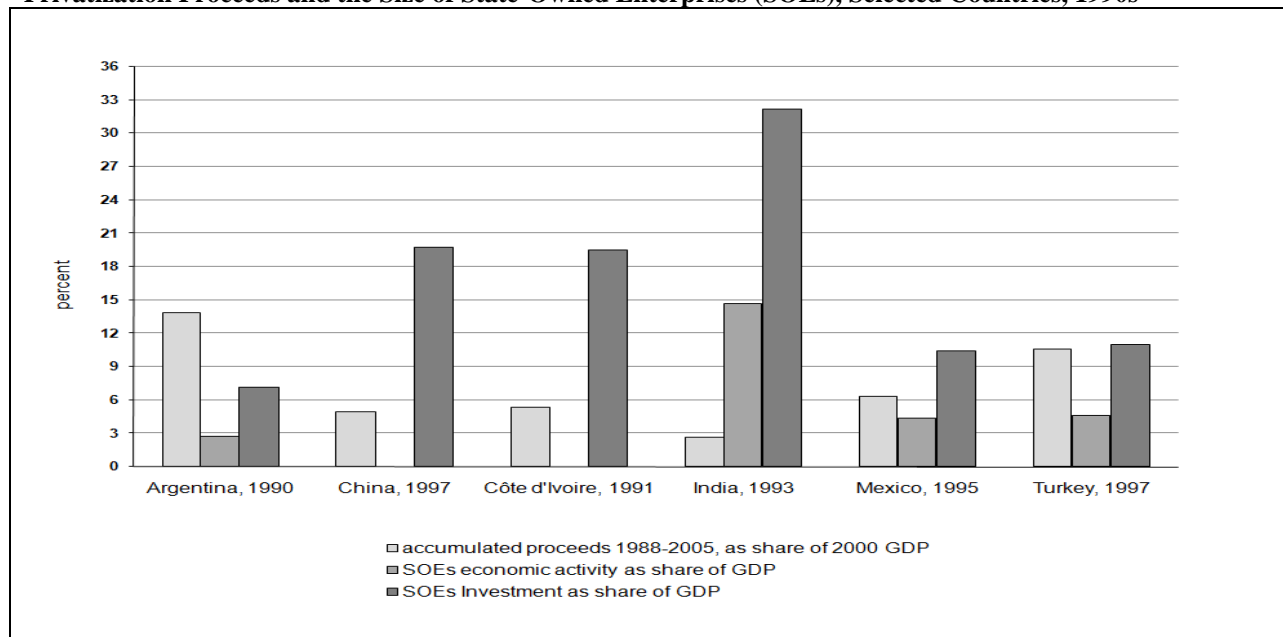
Source: World Development Indicators. 2000 Note: GDI, gross domestic investment, GDP, gross domestic product.

FIGURE 6
Change in Median Efficiency Performance in Competitive and Noncompetitive Industries before and after Privatization, Mexico 1983-91
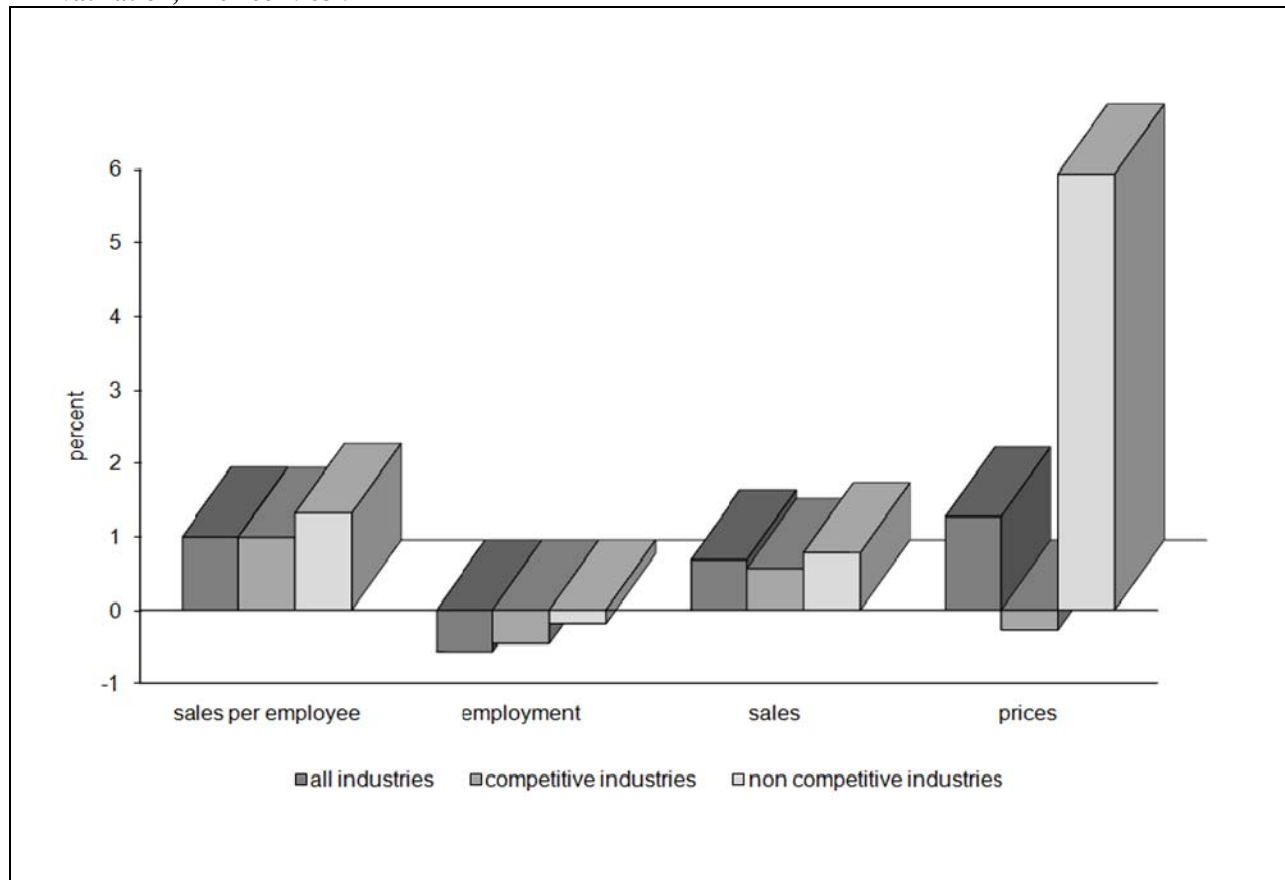
Source: La Porta and López-de-Silanes 1999.

FIGURE 7

Impact of Ownership on Performance, with State-Owned Enterprises as Reference, Fixed-Effects Coefficients, Czech Republic, Hungary, and Poland, 1990–93
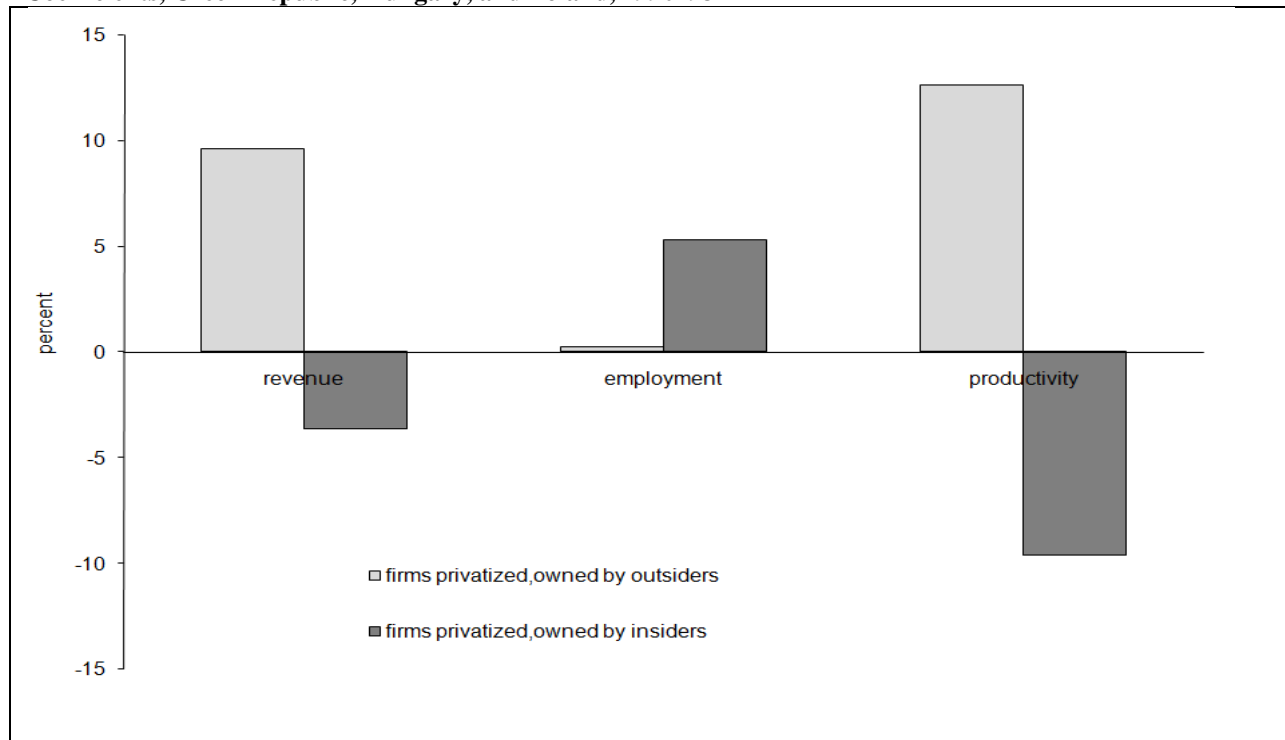

Source: Frydman et al. 1999.

Note: The fixed-effects coefficients are estimated controlling for year and country. The coefficients for privatizations owned by outsiders are statistically significant at 1 percent for revenue and productivity.

FIGURE 8
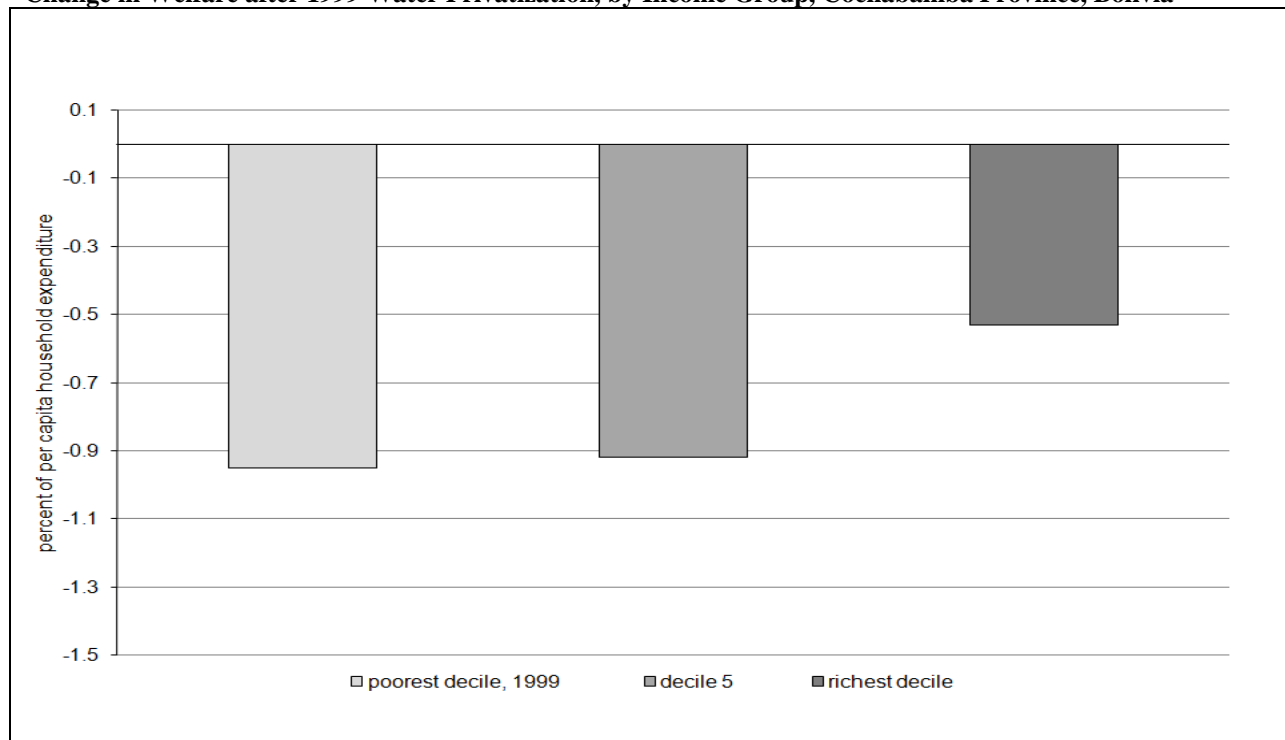**Real Water Prices in Two Provinces of Bolivia, 1992–2000**

Source: Barja, McKenzie, and Urquiola 2005.

FIGURE 9
Change in Welfare after 1997 Water Privatization, by Income Group, La Paz and El Alto Province, Bolivia
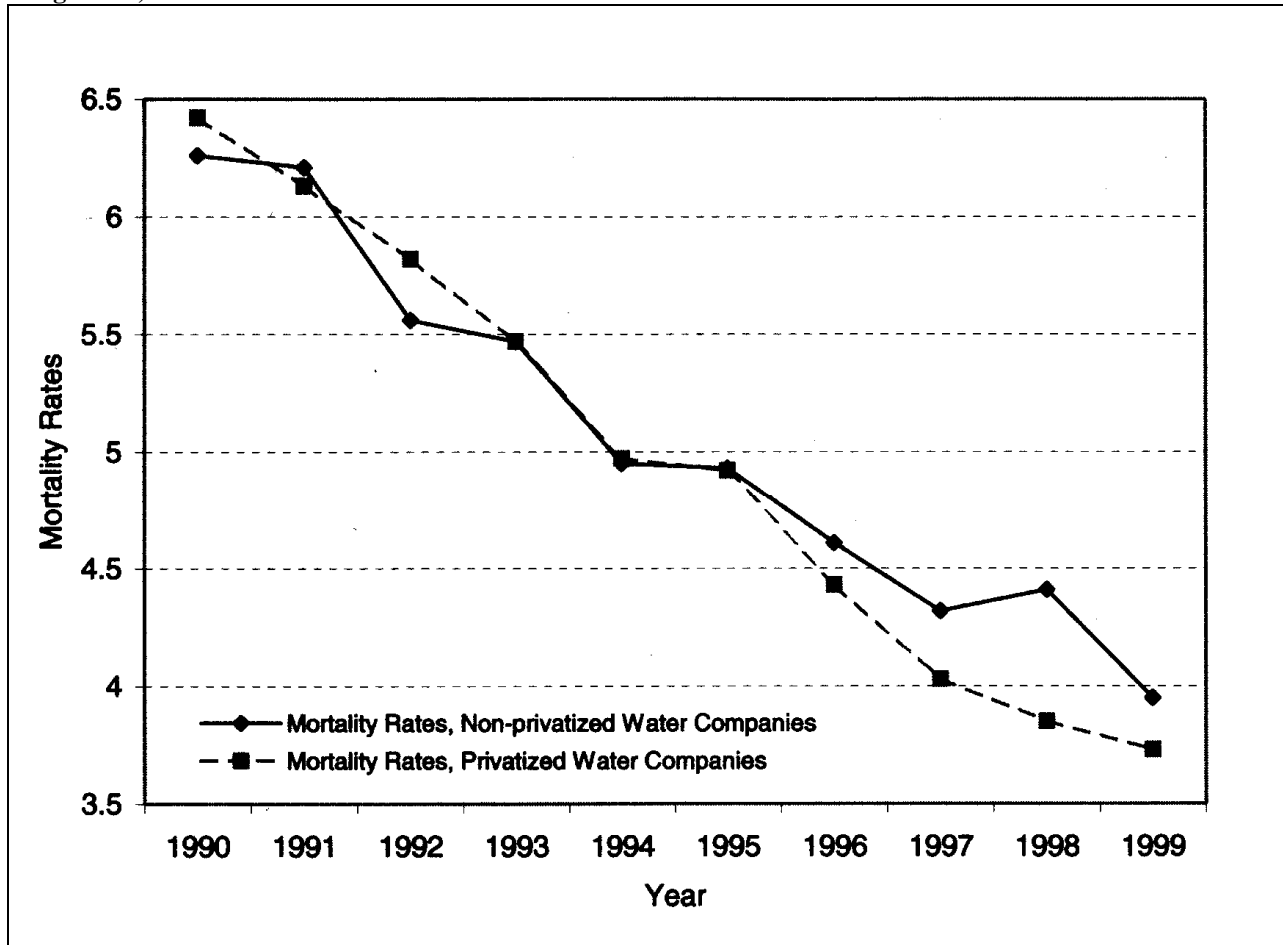

Source: Barja, McKenzie, and Urquiola 2005.

27
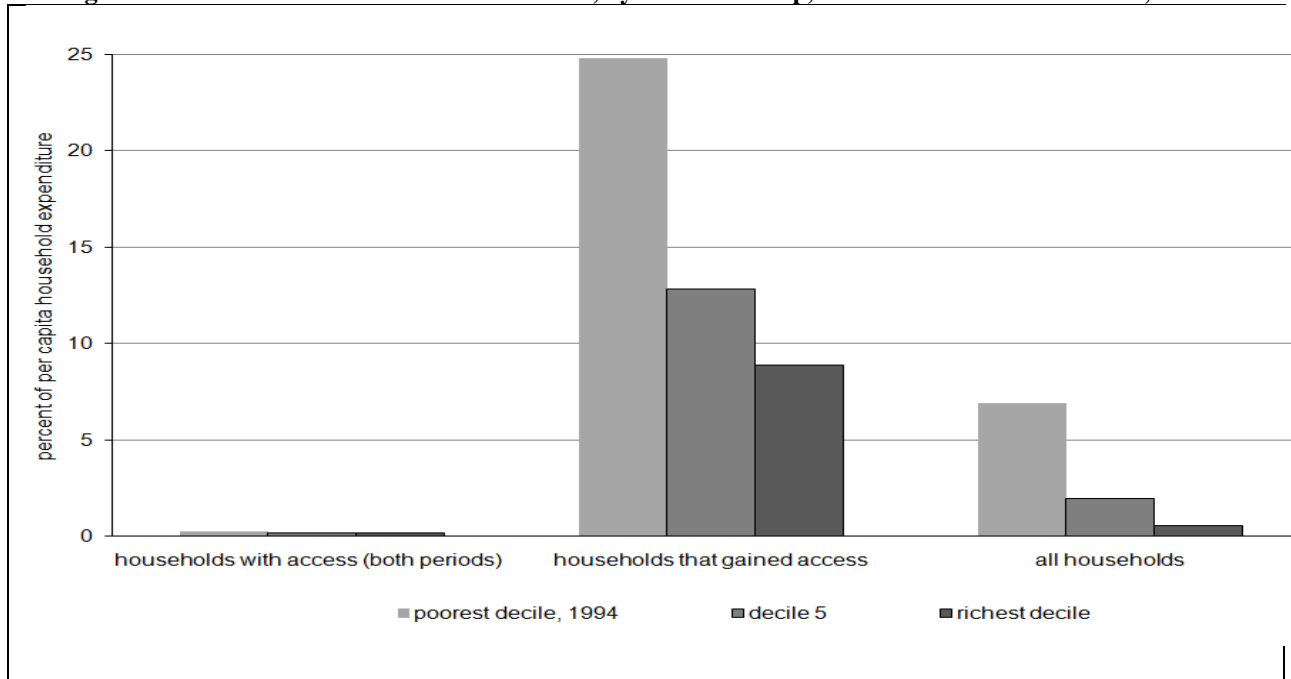
FIGURE 10
Change in Welfare after 1999 Water Privatization, by Income Group, Cochabamba Province, Bolivia

Source: Barja, McKenzie, and Urquiola 2005.

FIGURE 11
Child Mortality Rates in Municipalities Served by Privatized and Nonprivatized Water Companies,
Argentina, 1990–99

Source: Galiani, Gertler, and Schargrodsky 2005.

TABLE 1 From a State-Owned Enterprise (SOE) to a Regulated Private Monopoly: A Stylized Example of Privatization

($, except as specified)

Indicator	Subsidized SOE	Private monopoly
		(no subsidy; price cap)
Price	80	120
Subsidy, including fixed costs	4,825	0
Quantity supplied (units)	85	88
Quantity demanded (units)	92	88
Employment (labor units)	1,062.5	880
Sales	6,800	10,560
Wage bill	10,625	8,800
Profit (+) or loss (-)	-3,825	1,760
Total profit or loss, including fixed	-4,825	760
Implicit demand price	150	120
Consumer surplus	42,075	38,720

Source: Authors' calculations.

TABLE 2. Efficiency and Distributional Impact of Privatization. With State-Owned Enterprise (SOE) as a Reference

($, except as specified)

Impact	Change
Efficiency Gains	
Production (units)	3
Employment (labor units)	- 182.5
Distributional effects	
Taxpayers	4,825
Consumers	-3,355
Access	[a]
Employees	-1,825
Business Owners	760
Total Distributional effects	405

Source: Authors' calculations.
a. The valuation of access depends on the rationing scheme.