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Privatization in Africa: What has happened? What is to be done?

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Summary

Sub-Saharan African states urgently need expanded and more dynamic private sectors, more efficient and effective infrastructure/utility provision, and increased investment from both domestic and foreign sources. Privatization is one way to address these problems. But African states have generally been slow and reluctant privatizers; a good percentage of industrial/manufacturing and most infrastructure still remains in state hands. Given prevailing public hostility towards privatization, and widespread institutional weaknesses, such caution is defensible, but nonetheless very costly. The long-run and difficult solution is the creation and reinforcement of the institutions that underpin and guide proper market operations. In the interim, African governments and donors have little choice but to continue to experiment with the use of externally supplied substitutes for gaps in local regulatory and legal systems.

Keywords: Privatization, Sub-Saharan Africa

JEL Classification: F3, L3, N17, N27, N47, N77, O55

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I. Introduction

Consider the case of Guinea, one of the poorest countries in Africa, and thus, one of the poorest countries in the world.

From independence in 1960 through the end of the 1980s, Guinea's state-owned and operated infrastructure companies (SOEs) in telecommunications, energy and water provided consumers with an inadequate quantity of low quality services. As of 1989, only 38% of Guineans had access to piped water, almost none in rural areas. Those connected suffered frequent interruption of service. Water quality was poor and unhealthy; "...waterborne diseases were the main cause of death for infants and there were periodic cholera epidemics." (Ménard and Clarke, 2002, a, 277) One plus: the price for the few connected customers was low: US\$0.02 per cubic meter— m^3 —until 1986, and \$0.12 per m^3 thereafter. But half or more of the water sent into the system vanished and was never billed. At this price, with this rate of loss, the national water company could not come near covering its operating costs, much less invest in badly needed maintenance and expansion. Donors made repeated attempts to work with government to reform the national water company; these failed to make a major or sustained difference.

In 1989, Guinea entered into a lease arrangement with a private provider to deliver water in the capital, Conakry, and 16 other towns. Under this scheme, Government retained ownership of the assets, responsibility for setting policy and tariffs, and (with World Bank assistance) marshalling investment finance and expanding the network. A private firm was selected to operate and maintain existing facilities, and bill and collect payments from customers. By agreement, the price per m^3 of water at once more than doubled. This was still inadequate to cover operating costs, so a World Bank credit covered the difference between revenues and costs in the early years. This subsidy was to decline as either periodic rate increases or efficiency gains reduced the need.

Over the next seven years, major improvements took place. Connections increased from 12,000 to 23,000. The percentage of metered private customers rose from 5 to 93%, and to 100% for government customers. The percentage of the population with access to water rose from 38 to 47% (Brook Cowen, 1999, 1) and the pace of increase was greater than it had been under public ownership. Very importantly, water quality improved greatly.¹ Tariffs rose to levels covering variable costs, revenues of the water company rose by a factor of ten, and the World Bank subsidy ended. Sixty-four percent of customers billed paid their fees, (Shirley, 2002, 22) a modest rate compared to international norms, but much improved over past collection achievements. Compared to failed earlier attempts to reform the system without the involvement of the private sector, all this was impressive. But a number of major concerns remained.

First, by 1997 the price per m³ stood at US\$ 0.83, a near seven-fold increase from 1989, and more than 40 times the 1986 price. The price was very high in comparison to most OECD countries, much less African neighbors², and was considerably higher than in most other lease/concession arrangements in Asia and Latin America (where smaller increases had often provoked street protests). A cross subsidy scheme allowed small volume users to pay less than large, but both the reduction in price per m³ and the monthly amount to which the lower price applied were smaller than in most other countries. (Shirley, 2002, 15) Post-privatization, an essential commodity had become less affordable.³

¹ Improving water quality can have a large social impact. In Argentina, improvements in water quality in the 30% of municipalities with privatized provision led to declines in infant mortality, from water borne diseases alone, by 5 to 9%, versus areas where water continued to be supplied by publicly operated firms. The poorer the area, the greater the impact; poorest neighborhoods saw declines in infant mortality of up to 24%. See Galiani, Gertler and Schargrodsky (2002).

² In Abidjan in the neighboring Ivory Coast, the privatized water company offered an average price in 1997 of US \$0.54/ m³.

³ Less affordable for some; the distributional impact of the price increase is unclear. Most poor people in Guinea were not and still are not hooked up to the water network; those connected are probably from the middle and upper income strata. A price rise for these consumers, even substantial, may have a limited direct effect on either inequality or poverty. But it is also quite likely that increased prices in the formal water network have been passed on to many poor consumers, at least in urban areas—who often get their water from vendors (whose prices are always much higher per unit than from a formal connection to the network).

Second, while the physical network expanded, the rate of growth was less than anticipated. Unlike more recent leases and concessions around the world, this contract did not place investment responsibility in private hands, and it did not specify expansion and connection targets for the SOE that retained responsibility for enlarging the network. Third, the amount of unaccounted water remained well above 40 %. Government costumers did pay for service a bit more regularly than before, but many government offices remained in arrears to the provider—and the private company did not cut service to any central government unit, even though this was expressly permitted in its contract. Had water losses and billing and collection been more aggressively addressed, revenues would have increased, and prices might have fallen—but under the lease agreement the private provider had no overwhelming incentive to push for such improvements.

This was largely due to a fourth factor: The government was still very much involved in key parts of the water business, and its performance continued to be weak. The experienced private operator apparently had little difficulty persuading the inexperienced government regulators to accept price hikes. It may be that the private provider found it easier to negotiate tariff increases than to collect aggressively.⁴ In any event, since all commercial risk was borne by the government, the private manager was free to select the path of least resistance, constrained only by the competence and dynamism of the government regulatory agency. The question then becomes: Did regulators⁵ capture—for consumers—a reasonable share of the financial benefits arising from the efficiency gains produced post-lease? The answer depends on the “counterfactual;” what would have happened had the contract not been let, had the public sector remained in control? As discussed below, careful students of the process conclude that private involvement produced superior results, despite the large price increases.

⁴ The private provider would argue, with justification, that the high price was legitimate given government’s inability to expand the network as expected, to permit service termination to customers in arrears—i.e., to hold up its side of the bargain—and the reluctance of local courts to allow the water firm to sanction customers who failed to pay.

⁵ In Guinea, regulation of the contract was placed in the hands of the “rump” SOE that had formerly managed the water supply, not in a new, separate, legally defined and empowered regulatory body.

Thus, in sum, the lease produced gains, including gains to general consumers; but these were less than expected, and they came at a slow pace and quite a high cost.

II. African Privatization: The record to date

The Guinea water story reflects in miniature Africa's struggle with privatization, particularly in infrastructure, where one finds the largest and most economically important SOEs. The general story is this: Poor service provision by loss-making public enterprises led first to reforms short of private sector involvement. These produced no, modest, or unsustainable improvements. Financial losses mounted. They led to further deterioration in service quantity and quality, and increased burdens on the government budget. IMF involvement and surveillance led to a choking off of direct budgetary financing of SOEs. In most cases the banking system, initially state-owned or dominated, then took on the task of financing the enterprises. Debts were incurred but not serviced. The banks rapidly accumulated a non-performing portfolio and severe solvency problems. Financing/fiscal problems grew acute. These, and not efficiency concerns *per se*, became the principal driver of SOE reform. Typically, it was the IMF that highlighted the issue and insisted upon efforts to resolve it. In response, private sector management, financing or ownership was proposed. The World Bank then became more directly involved, in terms of reform/privatization design, and assistance in implementation.

In many, probably most African countries, the principal motivation for privatization has been to placate the IFIs. African governments do increasingly recognize the SOE problem; and numerous African leaders and observers preach the gospel of financial discipline and market-oriented reform. Still, commitment to privatization as the best way to solve SOE problems has been neither widespread nor strong. Most African leaders and officials would prefer that the SOE problem be addressed by means other than ownership change.⁶ A review of the scope and pace of African privatization supports this allegation.

⁶ Temu's and Due's (1998) description of Tanzanian reaction to the very idea of privatization applies in a number of other African states: "The concept of a centralized economy had been well taught and well

On average, African states have privatized a smaller percentage—about 40 %—of their SOEs than other regions, far less than in Latin America or the transition economies.⁷ Much of the African divestiture that has taken place has been of smaller, less valuable, often moribund manufacturing, industrial and service concerns. In contrast, infrastructure privatization has lagged. Of the roughly 2300 privatizations in sub-Saharan Africa in the decade 1991-2001,⁸ only about 66 involved these generally higher value, economically more important firms. An additional 92 transactions took place in transport, some of which might have been classed as infrastructure. But even if one includes all the latter, less than 7 % of sales have touched the upper end infrastructure firms.

Moreover, activity has been concentrated in a very few countries: Of the \$9 billion USD of African privatization revenues raised from 1991 to 2001,⁹ a full third was generated by a handful of privatizations in South Africa. Another 33 % came from sales in a group of four actively privatizing countries (Ghana, Nigeria, Zambia and Ivory Coast). Some 26 African countries, taken together, have privatized a scant \$ 0.7 billion USD of assets (see Table 2).

learned. The government feared losing its commanding heights; the people feared the loss of the enterprises their hard-earned taxes had supported. Those fearful of private enterprise saw the new owners dismantling the parastatals and cashing in on the rewards. Even supporters of privatization saw parastatal managers stripping the firms and cashing in whatever was saleable.” (333)

⁷ And if one removes from the list of 29 countries (for which one can estimate the percentage of the SOE portfolio divested) the six leaders in terms of numbers of firms sold—Gambia, Ghana, Kenya, Mali, Togo and Zambia—the fraction of SOE stock privatized falls to about ¼. Thirteen of these 29 countries have privatized less than 30 % of their SOE portfolios; only 6 have divested more than 75%.

⁸ Note that most of the 2300 sales were completed by 1997; since then, in line with the worldwide decline in investor interest in emerging markets, the number of privatizations in Africa has fallen below 100 per year.

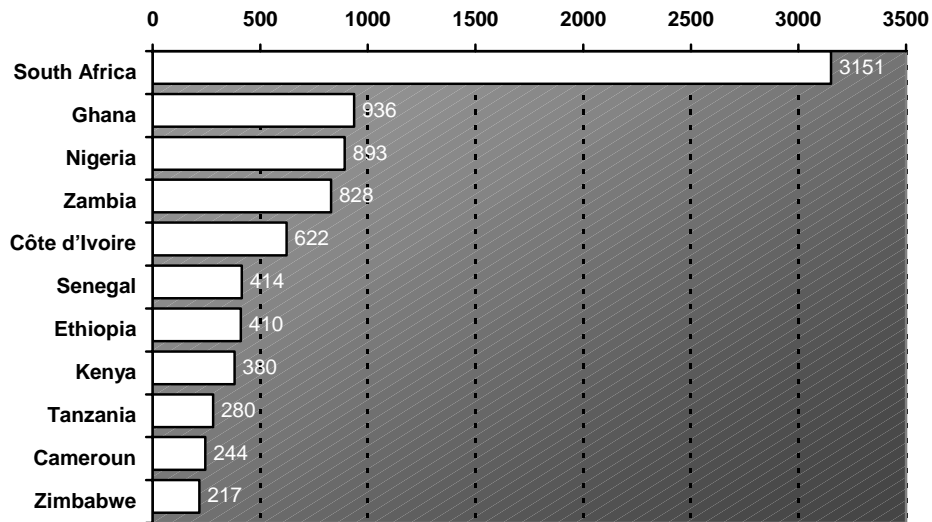
⁹ In contrast, privatization revenues in Italy alone, in the period 1990-2001, totaled \$112 bn USD, and even New Zealand—ranking 10th on an OECD list of privatizing states, and with a population of less than 4 million—generated more from privatization in this period than did all 37 African countries. (Source: Mahboobi [2002], 46) Moreover, African privatization revenues may be significantly overestimated; in a number of countries buyers have failed to make payment on transactions already recorded as complete.

Table 1. Privatization record in Africa 1991-2001

<i>Country</i>	<i>Number of transactions</i>	<i>Sale Value (US\$ mn)</i>	<i>Share of total SOEs divested</i>
Angola	57	6	...
Benin	28	49	38%
Burkina Faso	23	9	32%
Burundi	38	4	...
Cameroon	48	244	28%
Cape Verde	42	53	...
Central African Republic	18	...	50%
Chad	35	12	...
Congo (Brazzaville)	65	50	...
Congo (Kinshasa)	5	...	4%
Côte d'Ivoire	82	622	55%
Etiópía	10	410	6%
Gabon	1	...	6%
Gambia	17	2.4	85%
Ghana	181	936.5	69%
Guinea	31	45	27%
Guinea Bissau	25	0.5	64%
Kenya	189	381	79%
Lesotho	10	6.5	20%
Madagascar	61	16.9	33%
Malawi	11	53.2	44%
Mali	59	67.4	92%
Mauritania	19	1.2	20%
Mozambique	474	135	39%
Níger	10	1.8	18%
Nigeria	30	893.5	6%
Rwanda	1	...	3%
Sao Tome & Principe	4	0.4	...
Senegal	39	415	23%
Sierra Leone	8	1.6	31%
South Africa	8	3151	...
Sudan	32
Tanzania	199	287	53%
Togo	49	38	89%
Uganda	102	174	79%
Zambia	253	828	90%
Zimbabwe	6	217	10%
<i>Total</i>	2270	9111.9	Average: 40%

Sources: This and all other tables based on a compilation and updating of the data bases conducted by Thierry Buchs, IFC, 2002. They are drawn from World Bank Africa Region Privatization Database, World Bank, 2002; WDI database 1991-2000; IMF Staff Country Reports, 1998-2002; and Table 1, CAMPBELL WHITE & BHATIA [1998], Appendix A.

**Table 2: . Countries in which total transaction values exceeded
US\$200 millions (cumulative, 1991--2001)**



Finally, African states have retained significant minority equity stakes in the comparatively few infrastructure privatizations they have concluded, holding back from the market an average of 1/3 of shares. (See Tables 3 and 4, below) Governments claim that retained shares are weapons with which to protect the public interest against rascally or incompetent buyers. Moreover, they often hope to sell the retained shares later at a much higher price, after the new private partner has driven up value. Whether share retention actually achieves these goals is debatable. What is not in doubt is that continued government involvement and share retention reduces the number of bidders and therefore the price per share sold. The slow pace of sales, the reluctance to place the highest-potential assets on the market, the failure to sell all shares, poor business and legal environments, and the deficiencies of government regulation and administration—all combine to place African states in a dead heat with Middle Eastern and North African countries for the title of “region with the least foreign investment in infrastructure privatization.” (See Figure 1)

Table 3: African Privatizations by Sector, 1991—2001

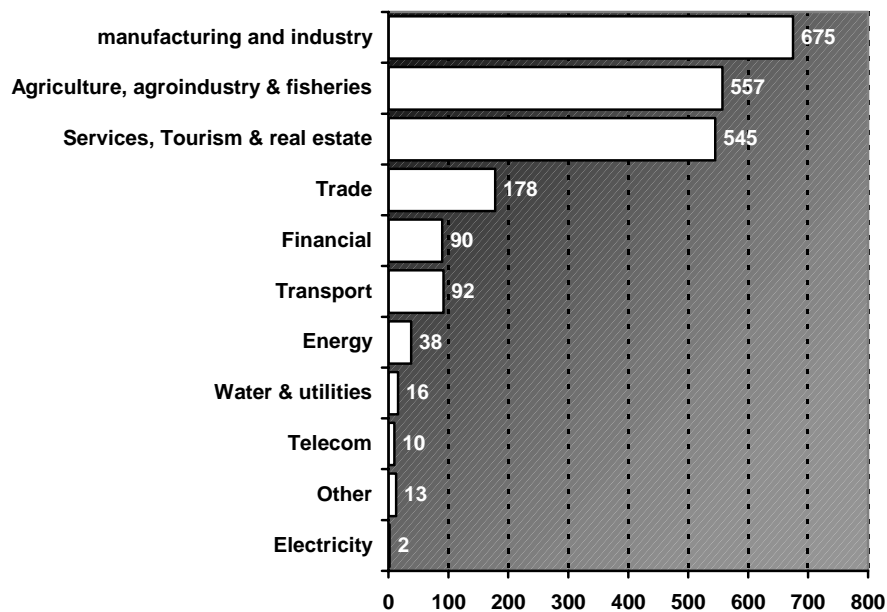
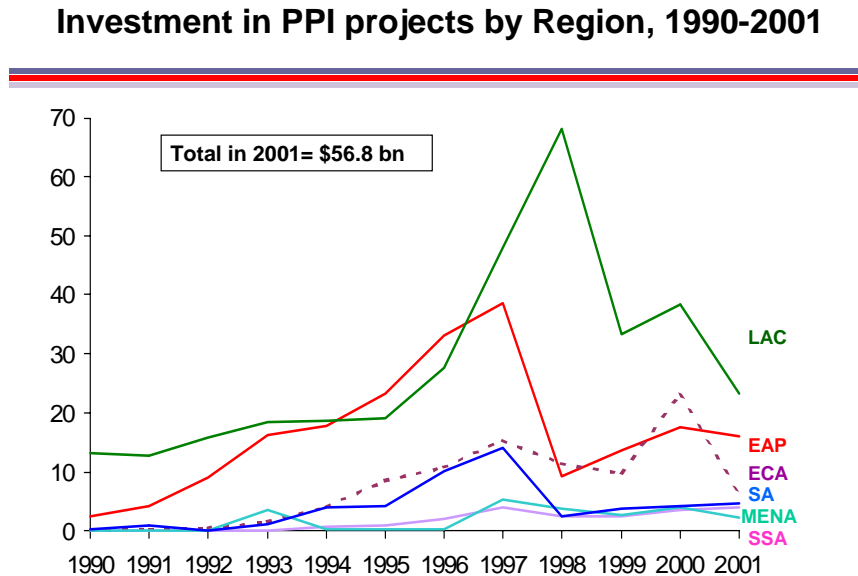


Table 4: Government's share of equity before and after privatization

Sector	Average Government's share of equity	(%)
Manufacturing & Industry	Before privatization	79.7
	After privatization	7.9
Agriculture, Agroindustry & Fisheries	Before privatization	79.5
	After privatization	1.6
Services, Tourism & Real estate	Before privatization	70.2
	After privatization	14.3
Trade	Before privatization	95.3
	After privatization	3.3
Transport	Before privatization	97.6
	After privatization	4.9
Financial	Before privatization	86.7
	After privatization	8.2
Energy	Before privatization	88.3
	After privatization	46.5
Water	Before privatization	100
	After privatization	12.5
Electricity	Before privatization	100
	After privatization	33
Telecoms	Before privatization	95.8
	After privatization	42.8
Other	Before privatization	63.3
	After privatization	10.2
Total average government's share of equity before privatization		89.1
Total average government's share of equity after privatization		10.3

Figure 1



Source: World Bank, Private Provision of Infrastructure Database, 2002. (The investment tabulated is that in network service industries only—but that is where the bulk of investment goes. LAC refers to Latin America-Caribbean countries; ECA, East Europe-Central Asia; EAP, East Asia-Pacific; SA, South Asia, MENA, Middle East-North Africa, and SSA, sub-Saharan Africa.)

Caution is correct?

Caution on ownership change could be the right policy for Africa. Here's the argument: Privatization outcomes are heavily affected by the institutional setting in which divestiture takes place. In their haste to correct the quality flaws and financial losses of SOEs, proponents of privatization pushed excessively for rapid ownership change while neglecting or insufficiently emphasizing the institutional foundations on which good privatization must be based. Experience such as Guinea's shows that privatization is more likely to result in increased efficiency and improved equity outcomes if it is embedded in a set of conceptually appropriate, functioning legal and economic institutions that support and guide market operations. These include: The definition and protection of property rights; contract enforcement and commercial dispute settlement through lawful, peaceful means, or, more broadly, court decisions that are timely and based on the law, not payments; a degree of regulatory capacity; functioning

bankruptcy/insolvency regimes; and a public administration that meets modicum standards of predictability, competence and probity and thus lowers transactions costs. If these institutions are not in place and working, privatization will produce sub-optimal, perhaps negative outcomes.

This notion has risen rapidly to the status of conventional wisdom; indeed, it is getting difficult to find an analysis of privatization that does not attribute to institutional weaknesses any deviation from hoped-for results. But the concept is disturbingly vague and difficult to make sense of operationally. It is unclear as to precisely how these institutions come into being and attain a state of effectiveness. Nor is it clear just which ones are crucial in what particular circumstances, or in what sequence they should be introduced. And while most of these policies/institutions function under the control of the public sector, is it, again, not clear as to what governments, and those that assist them, can do to aid their emergence and enhance their capacity.

What *is* known? (a) There is a strong association between institutional density and capacity and positive results, in both efficiency and equity terms, of ownership change. (b) Low income countries in general, and African countries in particular, rank low in terms of institutional density and capacity; and (c) the creation and reinforcement of market-supporting institutions, while imperfectly understood, is certainly a slow process. Thus, if African governments are moving cautiously on privatization—particularly infrastructure privatization—in order to buy time to establish the needed institutional and regulatory frameworks, this could be a logical and positive step.

This is a large “if.” To date, it would appear that few African states have used the time gained through slow privatization to attack effectively the problem of deficient institutions—or if they have, the results are not yet visible. (On the contrary, as is shown below in the case of Zambia, delaying privatization has sometimes resulted in further financial and asset erosion.) Admittedly, results would be hard to assess: Practitioners possess little in the way of operational guidelines concerning the minimal level of institutional density or capacity a state should possess before considering

ownership change.¹⁰ And the standards by which to measure institutional effectiveness are embryonic and general. As Shirley (2003, 1) notes, "...over time the development paradigm has shifted from 'get your prices right' to 'get your institutions right;' the latter instruction has proved as useless as the former."¹¹

One reason for this is that inaction on SOE reform sometimes reflects not simply lack of expertise, resources or institutional capacity, but rather intent, spurred by political hostility to privatization. As noted (see above, footnote 6), African intellectuals and officials have long been educated to view the public sector as the promoter and defender of indigenous interests, and to believe that privatization will empower and enrich foreigners. African trade unions and workers' representatives are generally opposed to privatization, fearing it will result in the loss of jobs, or worsen terms of service.¹² Many African (and European, Asian and Latin American) politicians and public officials reap material and prestige benefits from SOEs, in the form of loans, gifts, transport, housing, board memberships, future jobs for themselves, present jobs for friends, relatives and supporters, procurement kick-backs, and much else. Domestic private sectors often have cozy supply relationships with SOEs that could be threatened by the arrival of more aggressive, quality-conscious, cost-cutting private owners. In short, there are many powerful groups in all African states that have material reasons to delay, dilute or

¹⁰ A step in this direction, for one important sector at least, is found in Newbery (2001): He lists the policy, regulatory and institutional requisites for electricity privatization to be effective. In their absence "...reform of the....state-owned ESI to improve autonomy, accountability, and financial viability, may be the only option. The fact that such reforms have failed in the past does not make it wise to encourage irreversible reforms of unproven worth, and privatisation in unpropitious circumstances may be even more costly than the unsatisfactory status quo." (pp. 43-4) No African case is discussed in Newbery's paper. See also Sachs, Zinnes and Eilat, who argue that in transition states, at least, ownership change must be accompanied by a threshold level of what they termed "agency-related" institutional reforms of the type listed above. If this modicum level of contracting and incentive reforms is not present, then ownership change may produce no or even negative effects. Conversely, institutional change by itself is also insufficient to generate economic performance improvements "unless enough change-of-title privatization has already occurred." (p. 54)

¹¹ Rodrik, Subramanian and Trebbi (2002) argue that "the quality of institutions 'trumps' everything else" in explaining economic development outcomes. But they note that the argument is at such a high level of abstraction as to provide little or no guidance to policymakers.

¹² At time of writing, among many examples that could be given, COSATU—the trade union organization in South Africa—has recently held public demonstrations to protest all past and planned privatizations, and the Zambian trade union congress has held protest marches and called on government to rescind its decision to privatize the Zambian National Commercial Bank, and to halt preparations for privatization in the electricity and telecommunications sectors.

sabotage SOE reform, privatization in particular. Of course, they make their case not by complaining about potential harm to their material interests, but rather by pointing to perceived economic, financial and social shortcomings of privatization. On what grounds do they make their case?

III. Post-privatization Performance

Rigorous assessments of privatization are increasingly available in Latin American, transition, OECD and Asian countries. Such studies are relatively rare in Africa¹³—though, as shown below, the few that exist generally present a positive picture of privatization’s achievements, particularly in the manufacturing, industrial and service sectors. First, the critics’ indictment of privatization; this is necessarily somewhat anecdotal in nature.

Con...

To illustrate with a single important case, officials in Zambia are reportedly thinking of halting and perhaps reversing their privatization program—one of the most extensive in Africa in terms of number of transactions, proceeds generated, and percentage of SOE portfolio divested¹⁴ (see Tables above), and a program that in 1998 was hailed by the World Bank as “the most successful” in Africa. (Campbell-White and Bhatia, 1998, 111) But four years later, many Zambians clearly perceive privatization as almost entirely negative, and they are putting pressure on government to rethink the policy. Privatization is alleged to have:

- been imposed and micromanaged by the IFIs, without sufficient attention to requisite policy or regulatory frameworks, and with minimal involvement of Zambian citizens,
- resulted in the closure of many firms previously run by Zambians (there is particular resentment that many that continued or reopened are in the hands of foreigners, particularly South Africans),

¹³ “Monitoring and evaluation have largely been ignored; hence the paucity of data on—and the difficulty of judging—the progress and impact of privatization to date.” Campbell-White and Bhatia. (1998, 125)

¹⁴ Though in value terms, many of the firms sold (outside the copper sector) have been small; the big companies are only now being prepared for sale.

- added greatly to unemployment—and thus poverty and inequality—at a time when job opportunities are declining drastically,
- increased the incidence of corruption (there is widespread suspicion that the proceeds from sales have been unreported and misused), and in general
- benefited the rich, the foreign, the agile and politically well-connected (see Craig, 2000) at the expense of the poor, the domestic, the honest and the unaffiliated—as illustrated by the allegation that new private owners extract subsidies and tax concessions from government.

Zambians claim that the IFIs were originally uninterested in assisting them to deal with the negative social effects of privatization (severance packages, retraining schemes, monitoring contractual obligations of new owners), and that even now they only pay serious attention to such matters when they are expressly involved in a specific transaction; i.e., when the World Bank's private sector affiliate, the IFC, is one of the investors/purchasers, or when an IMF condition mandates movement on the sale of a major firm.

The sentiments of Zambian opinion-makers toward liberalization in general, and privatization in particular, are summarized in an editorial in *The Post* (of Lusaka; 11.28.02):

The hardships Zambians are going through are primarily a consequence of ... neoliberalism and neoliberal globalization. ... While it cannot be denied that corruption, extravagance and lack of priorities have considerably aggravated the situation, we shouldn't forget that these factors are a product of this whole system - they are inherent problems of these policies. These IMF and World Bank policies breed corruption, extravagance and lack of priorities in our leaders and indeed our people. ... And despite having liberalized its markets, as dictated by the IMF and the World Bank, Zambia has still not started benefiting from it.

What our country needs now is to think through its strategies and that primarily involves freeing itself from the IMF and World Bank indirect rule and start to direct the affairs of this country in the best interests of our people, and not the major shareholders of these institutions. Why should we privatize Zambia National Commercial Bank, Zesco Limited (electricity) and Zamtel (telecommunications) simply because the IMF and the World Bank want us to do so even when the great majority of Zambians are opposed to it because they

believe it is not in their best interest? ... The success of IMF and World Bank policies over any alternative model of social development is a matter of propaganda than fact. If humans prevail, alternative policies to the IMF and World Bank's programs will be found and implemented. The main thing is to have a political leadership that has a clear understanding of today's neoliberal world and can stand firm.

This encapsulates the views, prevalent in Zambia and widespread in Africa as a whole, that privatization has been forced upon Zambia by the IFIs, not produced the economic benefits it was supposed to deliver—and indeed imposed substantial costs—and increased the level of corruption. Are these allegations accurate?

Pro...

In 2001, the Zambian Privatization Agency commissioned a study to assess the effects of privatization. It found that 235 of the 254 firms privatized since 1991 continued in operation at the time of the study; not a bad achievement given the very poor financial state of these enterprises prior to divestiture, and the dismal business environment prevailing in the country throughout the 1990s. In terms of numbers of sales, 57 % of the buyers were Zambian citizens, and an additional 13 % were joint ventures between Zambians and foreigners; the remaining 30 % of sales were to foreigners (many of whom had been minority equity partners in SOEs and who held, and exercised, pre-emptive rights on the sales of shares). However, by value, Zambians account for just 5 % of sales, joint ventures 83 % and totally foreign purchasers 12 %. A scheme to “warehouse” a minority stake of shares in privatized firms and float them later to Zambian buyers has had but minimal success. Some of the most visible firms, such as the breweries, went to South African owners (who have turned them into profitable ventures).

A prime rationale for privatization is the inability of government to access investment capital for renewal and expansion of SOEs: In the non-mining firms reviewed, post-privatization capital expenditures totaled more than \$400 million USD. Nineteen firms, or 7.5 % of those privatized, closed following privatization, a fact much

lamented in Zambia—though a 7.5 % failure rate is less than small and medium business failure rates in most advanced industrial economies. Seven of the 19 subsequently resumed operations after being re-sold, and similar efforts were underway in an additional five—leaving only seven firms definitively closed.¹⁵ And a number of company closures sometimes cited as evidence of the failure of privatization were either firms that had always been private, or SOEs.

In the privatized non-mining firms, employment declined from 28,000 at time of privatization¹⁶ to 20,000 in 2001, a comparatively large percentage, but a small number in absolute terms. Most of the decline took place immediately following divestiture and was concentrated in a few large firms in agro-industry. Workforce expansions occurred in several firms.

There is less clarity and far more controversy about the fate of the 34,000 workers employed in the privatized mining sector. A highly publicized and troubling issue for the privatization program is that two large mines—Luanshya and Baluba—were sold to a bidder who agreed not to dismiss any of the 7,000 workers. The parent mining SOE, ZCCM,¹⁷ had assessed that up to 3,000 of these workers would be redundant under any reasonable business plan, but had lacked the funds to make the required severance payments. It therefore accepted a bid based on the dubious premise that the entire workforce could be maintained. Shortly following transfer of title, the new owner dismissed 3,000 workers. Under Zambian law private owners are responsible for termination benefits of workers dismissed after sale; in this case the new owner has failed to make the required payments. Subsequently, the firm went out of business entirely, and the residual 4,000 workers are now in the same boat as the previously laid-off 3,000. Understandably, worker and public reaction has been severely critical.

¹⁵ Three of the closed firms had long been non-operational prior to sale.

¹⁶ It is likely that there had been reductions in employee numbers prior to privatization, as part of reforms or in preparation for sale. In many countries around the world, the largest layoffs come well before a change of ownership. Thus, comparing employee numbers at the moment of privatization to some later point may underestimate the downsizing that occurred.

¹⁷ Itself subsequently privatized.

Overall, it is clear that employment in the mining sector has decreased by at least 7000 workers or 20 %. Assuming that the dismissal rate in the other affected mines was equal to that in the non-mining sector (28.5 %), this would amount to an additional 7700 layoffs, and a total reduction of workers in the privatized mining sector to around 19,000—and the fate of 10,000 of the remainder is in doubt, given the decision by Anglo-American, in January of 2002, to pull out of the ZCCM copper mining operations it had purchased in 1999.

A digression is in order to sketch the sad story of copper in Zambia in the last decade. The highlights are: a persistent and precipitous fall in world copper prices,¹⁸ a deep and costly politicization of the management and employment/procurement practices of the firm while an SOE; no investment in the sector for years prior to its sale; all this leading to Zambian production costs being among the highest in the world—resulting in losses on average of \$15 million USD per month over the past five years of its existence as an SOE. Discussions to privatize the sector began in 1991, but despite supposedly powerful donor prodding, nothing substantial was sold until 1999.¹⁹ The first serious effort to sell came in 1996-97. A fairly firm \$1 billion USD offer (counting promised investments) was on the table from a consortium of experienced copper firms. But responsibility for the transaction was removed from the respected Zambian Privatization Agency and handed over to a team of mine managers and former managers, many of whom had long opposed privatization. They rejected the offer and asked for much more, based on a book value calculation of the assets; the bidders walked away. Following two years of further asset deterioration and large losses the mines were sold for much less than what had been offered in 1997. And no one seems to know if there were any cash proceeds from the eventual sales,²⁰ or what happened to them if they did exist. (African Business, 2000)

¹⁸ Copper traded at close to \$7000 a ton in 1966 and averaged above \$3000 a ton until the mid-1990s; current prices are between \$1450 and \$1600 a ton.

¹⁹ The IFIs cannot win; they are blamed both for rushing the sale *and* delaying it. When asked why the sale took so long a Zambian mining official said that it was the fault of the donors; their pressure on government to sell led bidders to “sit and wait until they feel the price is right.” (Africa Business, 2000, 2)

²⁰ It is conceivable that there were no proceeds from these transactions. The costs of financial clean up and severance payments (even where they were correctly handled) might have matched or exceeded all

Perhaps the counterfactual would have been worse? To repeat, the privatized firms, outside the severely depressed copper sector, have done quite well, almost certainly far better than they would have had they remained under government ownership—and this in a time of severe economic downturn in Zambia. In the mining sector, no one can defend the Luanshya/Baluba sale. But even the low-price and subsequently cancelled take over of the other ZCCM mines by Anglo-American has resulted in substantial investments that government would never have been able to make. One can argue that perhaps these investments will serve as a foundation on which a subsequent owner can make the venture profitable (though clearly that was not the view of the highly experienced Anglo-American, which appears to have decided not to throw good money after bad).

Overall, the argument that any reasonable counterfactual would have resulted in inferior outcomes is fairly persuasive in the case of small and medium firms producing tradable goods—but much less convincing when large, relatively valuable firms are at issue. Certainly, the copper sector had been grossly mismanaged under state ownership, but it is evident that the privatization of the sector was poorly handled, both economically and socially. Zambians thus have legitimate reason to fear that the upcoming privatizations of major infrastructure firms could go wrong, given the non-transparent, efficiency and revenue decreasing manner that large firms have been divested in the past. An anti-privatization argument of despair once made in Russia may apply in the Zambian case: Retaining firms in state hands means that any positive flow of resources generated will likely be largely siphoned off or wasted, depending on whether the managers and supervisors are venal or incompetent (or both). But privatization may be worse, as the

revenues. But in the absence of a proper accounting the public is given license to speculate that not only these transactions were corrupt, but all others as well. (The IMF [2000] calculates, for 18 privatizing countries, that gross proceeds amount, on average, to 2% of GDP, while net proceeds [gross minus costs of advisers, financial clean up, worker dismissals] amount to half this number.)

lack of legal safeguards allows new owners to steal not simply the flow, but the entire stock of the firm.²¹

Finally, a nagging doubt: Is this problem “institutional” or “political” in nature—and what’s the difference? In line with the emerging conventional wisdom, institution building did precede ownership change in Zambia, as evidenced by the high marks given the personnel, policies and procedures of the Zambian Privatization Agency, and the relative lack of contentious sales carried out by this body. The major problem seems to have been the decision to remove the sales of the mining firms from the purview of the agency, a decision that was political in nature. Some would argue that poor or corrupt political decisions are themselves “institutional shortcomings.” This maintains the conceptual unity of the institutional argument, but at the cost of enlarging yet again an already too vast and unwieldy subject. And in practical terms, while one might make a case for retaining infrastructure firms in state hands pending the development of a modicum of regulatory capacity, the same can hardly be said for retention until the quality of sound political decision-making reaches some acceptable level. The point is to reiterate unease with the institution-building argument and approach.

Other African countries...

Is the Zambian case typical? Regarding the crucial issue of transparency, Table 5 presents the type and incidence of privatization methods employed in Africa. While no method is guaranteed to be free of manipulation and corruption, some methods are more transparent than others. The sale of shares through a public floatation is generally thought to be about the most transparent sales approach; but it has rarely been applied in Africa (outside of Nigeria and South Africa) in part because of the thin or embryonic nature of capital markets in most countries. Other methods can be designed to be competitive and transparent, such as tenders. But the ultimate transparency of the tender method depends on the honesty and competence of its administrators, to a greater extent than stock issuing. One cannot systematically link the method applied to the size or importance of

the relevant firm (though it is likely that only large firms were sold through public floatation).

Table 5: Methods of Privatization (1991-2001)

<i>Method of divestiture</i>	Number
Shares sold on Competitive Basis	728
Asset sold on a competitive basis	454
Liquidation	386
Shares sold to Existing Shareholders with Pre-emptive Rights	158
Lease	104
Direct sale of shares (i.e. non-competitive)	94
Shares sold through public floatation	69
Not specified	48
Restitution to former owner	47
Management contract	42
Management/Employee Buyout	33
Direct sale of assets (i.e. non-competitive)	29
Joint-venture	28
Free transfer of assets	12
Transfer to Trustee	11
Debt-Equity Swap	10
Concession	8
JV(D)	5
Lease /Management contract	2
Merger	2
TOTAL	2270

Buchs (2002) estimates in Table 6 the countries where obviously less transparent methods have accounted for a significant minority of sales. The numbers are sufficiently large to raise concerns, though no firm conclusions can be drawn.

Table 6: Countries in which uncompetitive methods reached 20% of total transactions (% of transactions)

Country	Direct sale of assets	Direct sale of shares	Preemptive rights
Cote d'Ivoire	8.5%	12%	11%
Gambia		23%	
Ghana	5%	4%	9%
Kenya	2%		51%
Malawi		27%	
Sao Tome		25%	

²¹ A similar argument was advanced in Kenya in January of 2000; several MPs and opinion-makers interviewed said they deplored the inefficiencies and rampant corruption in the major SOEs, but feared that privatization would only enlarge and entrench theft and mismanagement.

Better news...

Summarizing other studies of African privatizations: Boubakri and Cosset (2002) looked at 16 privatizations on the continent of Africa (none in Zambia). Profitability rose and efficiency fell, both by slight percentages. Neither of these shifts was statistically significant, but there was a significant increase in capital expenditures in the divested firms.²²

Jones, Jammal and Gokgur (1998) analyzed 81 privatizations in Côte d'Ivoire, covering the electricity sector in infrastructure with the rest operating in competitive or potentially competitive markets (in agriculture, agro-industries, and services). They found: (i) Firms performed better after privatization; (ii) they performed better than they would have had they remained under public ownership; and (iii) privatization contributed positively to economic welfare, with annual net welfare benefits equivalent to about 25 percent of pre-divestiture sales. These significant benefits stemmed from increases in output, investment, labor productivity, and intermediate-input productivity.

Appiah-Kubi (2001) reviewed 212 privatizations in Ghana, and reported positive results, in terms of: easing pressure on the balance of payments, increases in both allocative and x-efficiency, stimulation of local capital markets, enhancing the inflow of FDI, widespread quality gains for consumers, and increased employment and remuneration post-sale (though increases in jobs after privatization had not yet matched the cuts in worker numbers made prior to divestiture). Andreasson (1998) assessed privatization's impact in Mozambique and Tanzania and found positive changes in operating and financial performance of the divested firms. In both countries many commercial state firms had ceased operation before divestiture was contemplated; in both countries, three-fourths of such firms returned to productive activity following privatization. Substantial productivity gains were noted, due partly to reductions in the

²² The Boubakri/Cosset findings are of limited utility to this study since 10 of the 16 transactions analyzed took place in Morocco and Tunisia, and not in sub-Saharan Africa.

workforce, but also because of improved utilization of capacity. In most cases, investments, production, sales and value added increased sharply post-sale. “The overriding conclusionis that performance of privatized companies has met and even surpassed expectations.” (10)

Temu and Due (1998 and 2000) also reviewed Tanzania’s privatization experience and examined in detail post-sale performance in a set of firms. Of the 158 firms divested through 1999, 136 (34 % of the pre-privatization universe of 395 SOEs) had been sold, 115 closed or liquidated; an additional 24 firms had been leased, 8 placed under management contracts, and the rest were yet to be divested. By number, more than two-thirds of sales went to Tanzanian nationals; more than half of these “indigenous” or African buyers; the remainder, presumably, Tanzanian citizens of Asian descent. South African firms (De Beers, South African Breweries, R. J. Reynolds Tobacco SA) featured prominently as purchasers of the larger value firms. In their 1998 study, Temu and Due documented the extremely poor physical and financial condition of Tanzanian manufacturing firms prior to privatization,²³ and the tortuous, lengthy negotiations—often lasting years—between potential buyers of even the most wasted assets and an endless line of officials; they termed it “privatization by exhaustion.” They concluded that privatization “has increased government revenues, reduced subsidies to SOEs, and ... forced firms to operate more efficiently.” (339) In their second study (2000) they noted employment levels in 16 privatized firms examined decreased by 48 %. (327)

In infrastructure, Wallsten (1999) examined econometrically the effects of privatization, competition enhancement and regulation in telecommunications reform in 30 countries, half of them in Africa, the rest in Latin America. Enhanced competition produces the clearest, most positive effects. Ownership change by itself “does not appear to generate many benefits,” but does so when combined with separate and independent regulation. These are summary conclusions, not disaggregated by region. The data require careful interpretation: “....the finding that privatization is negatively correlated

²³ For example, the Morogoro Shoe Company, built—with IFI assistance—to produce 4 million shoes annually, 80% for export, “never reached more than 4% of installed capacity.” (320)

with the number of main lines....could arise because countries are more likely to privatize their incumbent telecom provider when service is poor....” (14) It may not be that privatization caused performance to weaken, as suggested by the regression, but rather that the weakest telecommunication firms were the ones to be privatized.

More positively, Ménard and Clarke (2002, a) conclude that despite the evident problems of private provision of water in Guinea, “...all parties have benefited from reform...(as)....increased coverage and improved quality more than compensated consumers for higher prices.” (274)²⁴ A definitive judgment depends on what would have happened in the absence of private involvement: Ménard and Clarke argue that the situation would have been worse had water management remained in public hands. They reach even more upbeat conclusions concerning private provision of water in Abidjan, Ivory Coast (Ménard and Clarke, 2002, b), where 30 years of private activity has resulted in very high levels of coverage—despite rapid population growth—an excellent quality of water and service, and declining prices for all consumers. Areas of concern are the decline of competitive bidding, the likelihood that the average price per m³ could easily be even lower, and the fear that the flexible collaboration between government and private provider that lay at the heart of the Ivorian success in this venture will be destroyed by the political instability in the country since 1999.

IV. What is to be done?

The first conclusion is that privatization of manufacturing, industrial and service sectors, and especially the small and medium firms in these sectors, should proceed apace. The empirical record on the effects of privatization in Africa is not as dense and robust as it is in other regions. Still, accumulating evidence suggests that firms producing tradables do more for the shareholders, consumers, taxpayers and economy in private hands than they ever did under public ownership. A surprising amount of assets of this type remains in state hands in Africa; it should be divested without delay.

Utilities and infrastructure, banks, railroads, and the large natural resource producers are the tougher cases. The dilemma is evident: Retaining them in classic SOE form means more poor service and financial losses; privatizing them incorrectly can be economically and politically problematic. Wallsten's important conclusion²⁵ regarding telecommunications divestiture—ownership change *per se* does not produce efficiency gains, but ownership change combined with separate and independent regulation does—must certainly apply to electricity and water and sewerage, given the lack in these sectors, compared to telecommunications, of technological change facilitating competition.

Thus, the medium- to long-term solution is to create and reinforce the institutional mechanisms that guide and regulate sales and market operations. Institutional improvements are required if African markets are to attract and retain good investors to manage, finance and own infrastructure services in ways that are beneficial to society while yielding a decent return on the capital and expertise expended. So, “institution building” programs—to enact the policy framework for and build implementation capacity in sales, regulatory and competition promotion agencies, to train the individual sellers and regulators, to empower and then isolate monitoring and enforcement agencies from political interference, to render contracts enforceable; all this would seem to be desirable. There is already much underway in these fields in Africa, most of it supported by the donor community. An examination of past initiatives to determine which were the more effective, why and under what circumstances, with suggestions on how to replicate the successful, might be of use.

Should this be the main thrust of reform efforts is questionable? Perhaps not. First, as the Guinea water case indicates, some infrastructure privatizations, in even the least auspicious institutional settings, have produced results far superior to the SOEs that preceded them. It is unlikely that the benefits of holding off on the privatization until

²⁴ Recent studies of privatization of infrastructure in Latin America also conclude that the benefits of increased access to these services post-sale outweigh the costs imposed on consumers by price increases. (McKenzie and Mookherjee, 2002)

²⁵ Mirroring that of Sachs, Zinnes and Eilat.

Guinean regulatory capacity was enhanced would outweigh the costs of poor SOE performance. Second, the long record of poor accomplishments in the area of institutional reform cannot be ignored. Nor can the ease with which substantive institutional achievements, such as the Zambian Privatization Agency, can be overturned or ignored at the drop of a political hat. Over the last few decades donors and African governments have launched numerous institution-building, technical assistance, regulatory policy and capacity, and public sector management reform efforts, the positive and enduring results of which are hard to find. They are not invisible, but they are certainly modest and often ephemeral. On the reasoning that the impact of present and future institution building efforts will resemble those of the past, and noting that even in the rare instances where positive institutional change has been effected it has taken ages to produce, I conclude that interim and innovative measures are needed to advance private participation in infrastructure provision.

Some possibilities:

1. **Outsource institutional provision**, for example by contracting regulatory conception and monitoring activities from skilled outsiders. This was successfully carried out (prior to the escalation of violence) in the case of the Palestinian Water Authority in Gaza, in a situation of extraordinary institutional and political difficulty.

In 1996, a private firm was awarded a four-year management contract to handle water and sanitation services. Payment was in two parts: a set fee, and a bonus payment based on the achievement of stipulated performance targets. The provider agreed to submit periodic performance reports, on which the additional payment would be based. The Palestinian Authority lacked the capacity to monitor the contract and especially the performance reports of the private provider.

The solution, funded by donors, was to hire Deloitte and Touche, Norway, to assess the technical and financial performance of the private provider. Every six months D & T reviewed the provider's performance reports, verified their accuracy, and

confirmed or disputed the performance score. By 1998 water service had improved considerably (consumption and revenues way up, system losses way down, water quality vastly improved). Outsourcing of regulation reportedly worked well; in its first report the private provider claimed a performance payment of \$498,000 USD, but the D & T auditors disputed several results, and the amount was lowered to \$444,000. (Saghir, Sherwood and Macoun, 1999)

2. A variation on this theme is: **Use private firms to carry out administrative functions that impede investment and privatization, and harm the general business environment.** For example, British Crown Agents have been contracted to handle procurement on a range of government contracts in a number of low-income countries, including Bolivia and Mozambique. This should speed the contracting process and save money by lowering transaction costs and side payments.²⁶
3. **Promote offshore commercial arbitration mechanisms;** e.g.; several small island states in the Caribbean use British courts to arbitrate contractual disputes between governments and private providers.
4. **Use respected NGOs, such as Transparency International, to vet transactions and certify the probity of the sales process,** as has been done for example in a telecommunications license auction in Slovakia.
5. **Use IFI guarantees to give comfort to investors regarding regulatory and contractual risk.** For example, the World Bank offers investors partial risk guarantees insuring against sovereign, political and regulatory risks; e.g., state failure to meet payment obligations, disallowance of stipulated tariff hikes, expropriation, legal changes with adverse material effects on the investor, availability and convertibility of foreign exchange, etc. Partial risk guarantees in

Ivory Coast and Uganda infrastructure privatizations have helped to mobilize financing and co-financing, lengthened maturities far beyond prevailing market terms, and significantly reduced interest spreads. Since the guarantee backstops only the contractual agreements states make with investors, governments incur no additional contingent liabilities.²⁷ Fees for the guarantee are born by the investors. (Gupta *et al.*, 2002)

6. To address the problem of small or deficient equity markets, the use of regional exchanges should be encouraged.

Finally, the external private sector might assist by offering guidelines on transparent procedures on the part of investors in privatization transactions, or more simply, by subscribing to, endorsing and help promulgating the promising “Business Principles for Countering Bribery” initiative of Transparency International.²⁸

Outsourcing and the reliance on such external measures could, indeed should produce positive effects. But they will be politically sensitive or outrightly unacceptable to many in Africa, who are likely to regard them as further infringements of sovereignty, or further suggestions of African incompetence. Even if accepted, these are at best temporary, stopgap measures. The real answer lies in the internal evolution of the institutional and political frameworks, a process—to hammer home the point—that is not well understood but is, at the very least, time consuming. Donors can cajole and help, as they have done in Guinea and Gaza and elsewhere, but their effectiveness is less than the

²⁶ There are no panaceas: A Swiss firm—SGS Holdings—contracted to handle some aspects of the corruption-ridden customs service in Pakistan is alleged to have bribed government officials in return for the contract, thus tainting the idea of outsourcing.

²⁷ There is a cost in that the amount available for lending from the World Bank (or IDA) to the country is reduced by the amount guaranteed. That is, the sum guaranteed is nominally recorded as a World Bank loan. The country pays no fee and makes no payments (unless the guarantee is called and the Bank has had to pay the investor).

²⁸ Launched in December 2002, with the assistance of a number of private firms including General Electric, Shell International and Rio Tinto, the principles “provide a framework for good business practices and risk management strategies for countering bribery.” The summary document lists the areas where bribery and corruption are most prevalent in business operations—outright bribes, political contributions, charitable contributions and sponsorships, facilitation payments, gifts, hospitality and expenses—and states clearly the actions that participating firms will eschew. (Transparency International, 2002)

eternally optimistic statements they issue would lead one to think. The African privatization dilemma, at least for the largest, higher potential firms, is unresolved.

Bibliography

- African Business (2000). "ZCCM: A tale of heartbreak and tears." <http://dsapce.dial.pipex.com/town/terrace/lf141/ab/feboo/abmn0201.htm> pp. 5.
- Andreasson, Bo (1998). "Privatization in Sub-Saharan Africa: Has It Worked and What Lessons Can be Learnt?" Gothenburg, Sweden: Swedish Development Advisers. [www.swedevelop.com](http://www.swededevelop.com)
- Appiah-Kubi, K. (2001). "State-Owned Enterprises and Privatization in Ghana." *Journal of Modern African Studies*, Vol. 39, No. 2.
- Brook Cowen, Penelope J (1999). "Lessons from the Guinea Water Lease," World Bank, Public Policy for the Private Sector, Note No.78, April, pp. 4.
- Boubakri, Narjess, and Jean-Claude Cosset, "Does privatization meet the expectations? Evidence from African countries," forthcoming in the *Journal of African Economics* (2002).
- Buchs, Thierry (2002). "Privatization in Sub-Saharan Africa: some lessons from experiences to date." International Finance Corporation, draft paper, pp. 20.
- Campbell-White, Oliver, and Anita Bhatia (1998). *Privatization in Africa* (Washington, DC: The World Bank.
- Craig, John (2002). "Privatisation and Indigenous Ownership: Evidence from Africa." Centre on Regulation and Competition, University of Manchester, Working Paper No. 13, January, 2002, pp. 19.
- Davis, Jeffrey *et al.* (2000). "Fiscal and Macroeconomic Effects of Privatization." International Monetary Fund Occasional Paper No. 194.
- Due, Jean M. and Andrew Temu (2002). "Changes in Employment by Gender and Business Organization in Newly Privatized Companies in Tanzania." *Canadian Journal of Development Studies*, Vol. 23, No. 2, pp. 317-333.
- Galiani, Sebastian, Paul Gertler and Ernesto Schargrotsky (2002). "Water for Life: The Impact of the Privatization of Water Services on Child Mortality," draft paper, August, pp. 45.
- Gupta, Pankaj, Ranjit Lamech, Farida Mazhar and Joseph Wright (2002). "Mitigating Regulatory Risk for Distribution Privatization—The World Bank Partial Risk Guarantee," Energy & Mining Sector Board Discussion Paper No. 5, The World Bank, pp. 13.

Jones, Leroy P., Yahya Jammal and Nilgun Gokgur (1998) “Impact of Privatization in Côte d’Ivoire. Draft Final Report.” Boston University, Boston Institute for Developing Economies.

Kayizzi-Mugwera, Steve (2002). “Privatization in sub-Saharan Africa: Factors Affecting Implementation.” United Nations University, WIDER Discussion Paper No. 2002/12, January, pp. 21.

Mahboobi, Ladan (2002). “Recent Privatisation Trends in OECD Countries.” *Financial Market Trends*. Paris, OECD, No. 82, June, pp. 43-58.

McKenzie, David and Dilip Mookherjee (2002). “Distributive Impact of Privatization in Latin America: An Overview of Evidence from Four Countries.” Unpublished draft paper, commissioned by Inter-American Development Bank, pp. 80.

Ménard, Claude and George R. G. Clarke, “A Transitory Regime: Water Supply in Conakry, Guinea,” in Mary Shirley, editor, Thirsting for Efficiency: The Economics and Politics of Urban Water System Reform (Washington, DC: The World Bank, 2002).

Newbery, David (2001). “Issues and Options for Restructuring the Electricity Sector Industry,” unpublished paper, Department of Applied Economics, Cambridge University, September.

Rodrik, Dani, Arvind Subramanian and Francesco Trebbi (2002). “Institutions Rule: The Primacy of Institutions over Integration and Geography in Economic Development.” International Monetary Fund, IMF Working Paper WP/02/189, Washington DC, pp. 46.

Sachs, Jeffrey, Clifford Zinnes and Yair Eilat (2000). “The Gains from Privatization in Transition Economies: Is ‘Change of Ownership’ Enough?” CAER II Discussion Paper 63, Harvard Institute for International Development, Cambridge, MA.

Saghir, Jamal, Elisabeth Sherwood and Andrew Macoun (1999). “Management Contracts in Water and Sanitation—Gaza’s Experience.” World Bank, Viewpoint Note No. 177, April, pp. 4.

Shirley, Mary M. (2003). “Institutions and Development: A Statement of the Problem.” Unpublished paper, The Ronald Coase Institute, Chevy Chase, MD, pp. 7.

Temu, Andrew and Jean M. Due (1998). “The Success of Newly Privatized Companies: New Evidence from Tanzania.” *Canadian Journal of Development Studies*. Vol. 19, No. 2, pp. 315-341.

Transparency International (2002). “Business Principles for Countering Bribery.” http://www.transparency.org/building_coalitions/private_sector/business_principles.html#countering

Wallsten (1999). "An Empirical Analysis of Competition, Privatization and Regulation in Africa and Latin America." World Bank Working Paper, WPS 2136, Washington, World Bank.

World Bank, Private Sector Advisory Services (2002). "Private Participation in Infrastructure Database." Washington, World Bank.

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- (lxvii) This paper has been presented at the international conference on “Tourism and Sustainable Economic Development – Macro and Micro Economic Issues” jointly organised by CRENoS (Università di Cagliari e Sassari, Italy) and Fondazione Eni Enrico Mattei, and supported by the World Bank, Sardinia, September 19-20, 2003
- (lxviii) This paper was presented at the ENGIME Workshop on “Governance and Policies in Multicultural Cities”, Rome, June 5-6, 2003
- (lxix) This paper was presented at the Fourth EEP Plenary Workshop and EEP Conference “The Future of Climate Policy”, Cagliari, Italy, 27-28 March 2003
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- (lxxii) This paper was presented at the 10th Coalition Theory Network Workshop held in Paris, France on 28-29 January 2005 and organised by EUREQua.
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- (lxxiv) This paper was presented at the ENGIME Workshop on “Trust and social capital in multicultural cities” Athens, January 19-20, 2004
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- (lxxvii) This paper was presented at the Workshop on Infectious Diseases: Ecological and Economic Approaches held in Trieste on 13-15 April 2005 and organised by the Ecological and Environmental Economics - EEE Programme, a joint three-year programme of ICTP - The Abdus Salam International Centre for Theoretical Physics, FEEM - Fondazione Eni Enrico Mattei, and The Beijer International Institute of Ecological Economics.

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