



PRIVATIZATION IMPLEMENTATION PROJECT

The Costs of Not Privatizing: An Assessment for Egypt

SURVEY AND EMPIRICAL ANALYSIS

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1. Introduction: The Costs of Privatizing and the Costs of Not Privatizing

This report looks at privatization as a two-sided debate about implementation policy. While privatization is one element of the so-called “Washington consensus” that actually finds broad general acceptance among policymakers worldwide,¹ there are greatly varying degrees of policy commitment across countries in its actual implementation. The Government of Egypt (GOE) describes its own approach as gradualistic, and in terms of actual progress, this has certainly been the case since 2000: according to MOEFT (2001), “Egypt’s privatization program has adhered to rational, well-studied steps . . . despite the international community’s constant pressures to privatize with speed and vigor.”

We recognize that the privatization record shows both positive and negative experiences. Countries that have pursued the reform agenda have not done universally well, and policies pressed by international advisors have sometimes had poor results. There are good reasons for aggressive privatization, and there are arguments for gradualism in privatization. There are costs of not privatizing, but there are also costs of privatizing. In this introductory section we want to describe both sides of the theoretical question in as clear and balanced a way as possible, making no value judgments. We will first describe the two alternative approaches to privatization, then outline the costs associated with each of the approaches.

1.1 Characterizing the Alternative Approaches to Privatization

We must first clearly describe what we mean in this study by “not privatizing” versus “privatizing”. Indeed, given the fact that almost all governments are committed to privatization in principle, “not privatizing” more accurately means gradualistic privatization, while “privatizing” means aggressive, rapid privatization.² In other words, we are really talking about two different approaches to privatization – but so different that they are widely acknowledged by experts on both sides of the argument as different in kind. This report is therefore an attempt to dimension and weigh the costs of delayed, gradualistic privatization, versus those of rapid privatization.

The following table sets out the attributes of these two different approaches. They are presented in rather polar terms, in order better to highlight their differences and identify their relative costs.

Table 1: **Characteristics of Alternative Privatization Policies**

“Not Privatizing” <i>(gradualistic privatization)</i>	“Privatizing” <i>(aggressive privatization)</i>
1. Overall Approach <ul style="list-style-type: none">Gradualistic approach guided by foundation philosophy that privatizing companies should be given the time to improve under state ownership in order to obtain a higher price at privatization. Fear of public reaction to selling public assets at low price, or of selling valuable national assets to foreigners. Concern	<ul style="list-style-type: none">Aggressive approach guided by foundation philosophy that almost any form of private ownership is preferable to state ownership. “Privatization is an end in itself, essential to severing the links between enterprises and the state”.³ Attitude that political unpopularity and the short term costs of

¹See Williamson (2002)

²Though gradualistic privatization does of course mean that at any point in time, more firms remain actually not privatized than would be the case under the more activist alternative privatization policy.

³Nellis (2002), p. 43, reviewing Russian privatization policy at its “high water mark” in 1994.

Table 1: **Characteristics of Alternative Privatization Policies**

<u>“Not Privatizing”</u> <i>(gradualistic privatization)</i>	<u>“Privatizing”</u> <i>(aggressive privatization)</i>
<p>that privatization as an end in itself can leave companies in the hands of unqualified or venal owners. Sensitivity to popular view that privatization is unfair to workers and the poor, while benefiting the rich and powerful.</p>	<p>privatization must be suffered in order to realize the benefits. Core belief that privatization has a strong positive impact, beyond direct microeconomic effects, on macroeconomic competitiveness and growth.</p>
<p>2. Divestiture Pricing</p>	
<ul style="list-style-type: none"> • Substantial effort devoted to target valuation of privatizing companies, or use of historical rules of thumb; resistance to flexible pricing. Government budget pressure to obtain high sale prices, and sensitivity to public perception of selling at too-low price. Tender procedures with unrevealed reserve price. 	<ul style="list-style-type: none"> • Economic, flexible pricing criteria oriented toward market value to the buyer, with reserve price, if any, published prior to auction.
<p>3. Privatization Governance Structure</p>	
<ul style="list-style-type: none"> • Privatization decision-making structure is diffused, with authority at higher-level boards, government ministers or ministerial councils, parliament, and with labor, management, and governing boards of the PEs themselves 	<ul style="list-style-type: none"> • Full privatization decision-making authority focused on the privatization agency, which has no role in the corporate governance of PEs, and whose mandated mission is the rapid sale of state-owned enterprises to qualified owners at best near-term value
<p>4. Employment Policy</p>	
<ul style="list-style-type: none"> • Protection of employment levels / prevention of layoffs built into tenders 	<ul style="list-style-type: none"> • Buyers have considerable ability to right-size staffing upon privatization
<p>5. Financial Restructuring</p>	
<ul style="list-style-type: none"> • Privatized companies remain obligated to repay past loans from state-owned banks, and arrearages to state-owned utilities and tax authorities 	<ul style="list-style-type: none"> • Companies are sold free of accumulated excessive debt to state-owned banks and arrears to state-owned utilities and tax authorities

These attributes are often governed by privatization law and regulation, not simply the attitudes of privatization authorities.

1.2 Hypothetical Costs of Privatizing versus Not Privatizing

Given the preceding description of alternative privatization policies, we can now lay out the theoretical costs of not privatizing versus the costs of privatizing. We should first recognize that everyone, whether for or against privatization, shares the same overall goal: poverty-reducing, sustainable economic growth. They disagree on which approach, gradualistic or aggressive, best achieves this broad goal.

In presenting the costs of the two approaches, this overall objective – sustainable growth – can be broken down into five major subcomponents: (i) employment, (ii) the government budget, (iii) investment, (iv) competitiveness, and (v) social welfare. What are the potential costs, in terms of these subcomponents, of gradualistic versus aggressive privatization? In

later sections, we will return to these same five components when we empirically assess the relative costs of the two approaches.

Again, these are hypothetical costs, as they would be stated strongly by an advocate for each side, without any judgment at this point as to their impact or weight in practice.

Table 2: **Summary of Hypothetical Costs of Alternative Policies**

<u>Area</u>	<u>Costs of Not Privatizing</u> <i>(gradualistic privatization)</i>	<u>Costs of Privatizing</u> <i>(aggressive privatization)</i>
1. Employment and wages	<ul style="list-style-type: none"> • Workers are retained in redundant positions, delaying their needed retraining and transfer to more economically useful and efficient jobs • Wages remain depressed, and often in arrears, because of excess staffing and chronic PE cash flow problems – retained workers often receive wage increases after privatization 	<ul style="list-style-type: none"> • Immediate job losses, especially in regional pockets, when PEs are privatized due to restructuring for competitiveness • Job losses in government as the bureaucracy required for managing PEs becomes redundant • Retained workers may be forced to accept reduced benefits, and sometimes lower pay
2. Government budget	<ul style="list-style-type: none"> • Expenditure burden of direct subsidies to PEs • Expenditure burden of PEs accrual and nonpayment of arrears to state-owned utilities • Expenditure burden of written-off loans of state-owned banks to PEs • Expenditure burden of costs of bureaucracy needed to manage government ownership • Expenditure burden of essential minimum equipment investment needs of PEs • Expenditure burden of unemployment and worker transition when uncompetitive PEs finally fail • Tax losses as a result of lower turnover and profitability relative to private sector operation • Loss of proceeds of quick privatization sales, and erosion of potential proceeds as financial condition worsens 	<ul style="list-style-type: none"> • Expenditure burden of immediately absorbing costs of labor restructuring, and of extended unemployment support, associated with privatization • Loss of potential loan and arrearages repayments if PEs must have their debts restructured in order to be sold quickly • Loss of higher proceeds from privatization sales that could be gained if PEs were restructured prior to privatization • Loss of taxes as a result of incentives given to attract investment into privatizing companies • Rapidly-privatized PEs are sold to underqualified buyers, resulting in continued inefficiency or failure, with worse budgetary liability than if retained by state • Costs of legal and institutional / bureaucratic apparatus that must be put in place to regulate private operation of business

Table 2: **Summary of Hypothetical Costs of Alternative Policies**

<u>Area</u>	<u>Costs of Not Privatizing</u> <i>(gradualistic privatization)</i>	<u>Costs of Privatizing</u> <i>(aggressive privatization)</i>
3. Business Finance, Investment (domestic and foreign)	<ul style="list-style-type: none"> • Capital shortage in PEs who are closed to private ownership investment • Loss of opportunity to attract foreign investment into privatizing companies, and follow-on investment • Generally lower preference for investment in the country by domestic and foreign investors due to statist economic management • Waste of business finance provided by the state to uncompetitive firms • Buildup of nonperforming loans in state-owned banks • Negative effect on country's borrowing capacity of accumulated SOE-related debt 	<ul style="list-style-type: none"> • In countries with less developed capital markets where subsidized / concessional loans from state-owned banks are a key credit source, potential for less availability of business finance
4. Competitive-ness	<ul style="list-style-type: none"> • Higher cost and lower quality of goods produced by PEs focused on job and wage protection • Maintaining bureaucracy required to protect uncompetitive PEs • Continual erosion in firm's competitiveness and increasing likelihood of eventual bankruptcy and liquidation, caused by failure to restructure and inadequate technology-improving investment • Slower pace of marketenhancing economic reforms that would otherwise be stimulated by privatization • Slower competitive cluster growth 	<ul style="list-style-type: none"> • No obvious cost, other than through potential for decreased business finance noted above

Table 2: **Summary of Hypothetical Costs of Alternative Policies**

<u>Area</u>	<u>Costs of Not Privatizing</u> <i>(gradualistic privatization)</i>	<u>Costs of Privatizing</u> <i>(aggressive privatization)</i>
5. Social welfare issues	<ul style="list-style-type: none"> • Consumer welfare / choice losses caused by repression of competition through subsidized prices or protection of PEs; consumers are offered fewer choices, goods are of lower quality • Environmental damage due to under-regulation of PEs • Ongoing corruption / cronyism / rent-seeking in the appointment and remuneration of supervisory and management board personnel, and in procurement and contracting in state-owned firms 	<ul style="list-style-type: none"> • Higher prices as private owners move from subsidized prices to cover true economic costs, including normal return on capital • Potential monopolistic pricing behavior of private owners; gouging of consumers • Corruption in the privatization process, yielding unfair benefits to the rich and well-connected at the expense of the poor; unfavorable income distribution effects • Compromises to labor safety in order to cut costs • Loss of old-age security if private companies mismanage employee pensions or fail • Environmental damage in pursuit of profit

These costs may not all be of equal weight, but all, on both sides of the argument, have been empirically observed to some degree. All are valid. The issue boils down to which, in the aggregate, are greatest in practice.

We are now prepared to analyze the empirical record in an attempt to weigh these relative costs. We turn first, in the following Section 3, to a review of the large body of existing empirical literature on the effects of privatization. Then, in Sections 4 – 7, we conduct empirical analysis for Egypt, at both the macroeconomic and microeconomic levels.

2. Survey of Previous Empirical Studies

Since the mid-90s, as the period of wide experience with privatization gained enough duration to investigate impact, a large number of empirical studies on its effects have been carried out. Since these studies are now so extensive, especially on the microeconomic side, a review of this empirical literature is fundamental to evaluating the costs of not privatizing in Egypt. Egyptian policymakers, and the public, must appreciate these findings and their applicability to Egypt. Indeed, as Khattab (1999) notes, through such a process of understanding the benefits that privatization had brought to other developing economies, “a new perception of reform and privatization was born in the Egyptian society” in the early 1990s. We begin with studies of firm-level effects, then proceed to macroeconomic empirical studies.

2.1 Microeconomic Studies

In their extensive study of the microeconomic effects of privatization for the World Bank, Megginson, Nash, and van Randenborgh (1996) observed that “surprisingly little direct empirical work has been done to see whether privatization is delivering the expected results”. Since then, however, a virtual tidal wave of research has been carried out. In this section we provide a review of this microeconomic empirical literature. These studies are now so extensive that within the past two years we have begun to see survey articles

spanning the literature to determine if general conclusions can be drawn. These studies provide complete listings of the over 150 surveyed papers, showing their individual results, so there is no need to repeat such detail here. Rather, we review the broader surveys and their conclusions.

- One of the first rigorous empirical analyses of privatization was the oft-cited study by the Egyptian economist Ahmed Galal, Leroy Jones, Pankaj Tandon and Ingo Vogelsang (1994), which showed significant performance improvement in 11 of 12 large privatized airlines and utilities in Britain, Malaysia, Chile, and Mexico, compared to what could have been expected had they remained in state hands.
- Megginson, Nash, and van Randenborg (1996) substantially broadened the empirical base, studying 61 companies in 32 industries from 18 countries (twelve industrial and six developing), all of which had been privatized by selling shares to the public, so that comparable pre- and post-privatization performance data were available. Comparing figures for the three years after privatization to the three years before, the study showed an average increase in profitability of 45%, average output growth of 27%, and average investment expansion of 44%. Profitability increased for 69% of the companies, sales per employee for 86% of them, output for 75%, and investment for 67%. The study even showed a moderate average increase in employment after privatization, with two-thirds of the companies experiencing post-privatization employment increases.
- Megginson and Netter (2002) is a widely-cited defining survey of empirical studies on privatization. They characterize their approach as follows, directly in line with our present purposes:

“Throughout this survey, we adopt the perspective of an advisor to a government policymaker who is wrestling with the practical problems of whether and how to implement a privatization program. The policymaker asks ‘What does the research literature have to tell us about these aspects of privatization as an economic policy?’”

Specifically addressing the question “Has privatization improved the financial and operating performance of divested firms?”, they surveyed 38 separate studies using rigorous empirical methods. At least 20 of these studies focused on developing and transition economies, covering at least four hundred different privatized companies. Their overall conclusions are:

- “The studies cited here almost unanimously report increases in performance associated with privatization. This consistency is perhaps the most telling result we report – privatization appears to improve performance measured in many different ways, in many different countries.” (p. 25)
- “Research now supports the proposition that privately-owned firms are more efficient and more profitable than otherwise-comparable state-owned firms. . . . We know that privatization “works,” in the sense that divested firms almost always become more efficient, more profitable, increase their capital investment spending, and become financially healthier”. (p. 48)
- Some of the studies reviewed in the Megginson and Netter (2002) survey apply particularly to Egyptian privatization issues:
 - Relevant to Egypt's still large stock of “joint-venture” companies, Tian (2000) who studied 825 firms listed on the Shanghai stock exchange and found that the fully privately-owned firms had better performance than the mixed-ownership firms.

- Frydman, Gray, Hessel, and Rapaczynski (1999) studied 506 midsize manufacturing companies in the transition economies of Central Europe pre- and post-privatization and found that privatized companies performed better, looking at sales, employment, productivity, and material costs. The best improvements were in sales growth at firms privatized to outside dominant investors, a finding that is supported by Egypt's experience.
- La Porta and Lopez-de-Silanes (1999) tested the performance during the 1990s of 218 companies divested by state owners through 1992. Compared to their performance prior to privatization, output and profitability increased substantially. Employment declined, but wages improved.
- As Nellis (2003) observes: "Almost all empirical studies of Latin American privatization conclude that it improves firm performance. . . . Overwhelmingly, these studies conclude that infrastructure privatization in Latin America improves financial and operating performance in (most) firms, relaxes the previously prevailing investment constraint, extends network coverage and access to it, and generally enhances the quality of services." (p. 7)

In sum, the empirical record on the effect of privatization on microeconomic performance can now be considered conclusive. As predicted by economic theory, enterprises moved to private hands perform substantially better than when owned by the state.

2.2 Privatization of Public Utilities

Because of their size and prominence, relatively good data is available for publicly-owned utilities that have been privatized, in developed and developing economies. Consequently there has been much empirical research on the effects of privatization on the operating performance of privatized state-owned utilities (SOUs) and on their comparative services delivery before and after privatization.

Like the research on industrial and commercial companies, these studies generally show improved operating performance and service delivery as a result of privatization. There is however another key associated conclusion: privatization of public utilities without regulatory reform probably can do more harm than good. For telecommunications companies, for example, the key determinant of improved performance and service delivery for utilities is competition, not privatization alone.⁴ While privatization with competition appears to deliver the best results, privatization without regulatory reform can damage consumer welfare.

Latin America has had the most extensive experience with the privatization of public utilities, as reviewed by McKenzie and Mookherjee (2003) in their survey and extension of individual country studies. It is interesting to recapitulate the utilities privatization methods employed in the four countries they review:

- *Argentina*: In the early 90s, the country privatized telecommunications, electricity, water, gas, air transport, rail transport, petrochemicals, tankers, navigation, and insurance. Its method was inviting bids from prequalified international buyers. Workers received 10% of company shares. Some \$23 billion in proceeds was realized.
- *Bolivia*: Principal utilities privatized in the mid-to-late 90s included telecommunications, electricity, water, transport, and oil and gas. The main method used was "capitalization", wherein the winning bidder contributed the entire amount of his bid to the company's paid-in capital over a period of time.

⁴ See for example Wallsten (2000), reviewed in Megginson and Netter (2002).

The state realized no direct privatization revenues, but about \$1.6 billion went into the companies. Workers received 5 percent of the shares, and 45% went into the state pension fund. In the case of water, privatization was by a concession arrangement.

- *Mexico*: Privatization of most the major utilities began in earnest in the early 90s and continued through the decade – telecommunications, water, natural gas, civil aviation, and banks. The method used was sale of control rights or majority stake in a first-price, sealed-bid auction. Proceeds amounted to \$33 billion.
- *Nicaragua*: Transitioning from a socialist economy, Nicaragua privatized state-owned banks in the early 1990s, then opened electricity and telephone services to private companies.

Household surveys were used to measure the welfare effects on consumers of these privatizations. McKenzie and Mookherjee (2003) found that in all cases, privatization increased consumer access to utility services. As for the cost of utility services to consumers, in five cases studied prices fell, and in five they rose.⁵ Looking at income inequality, they find that the effects are mixed, but mainly due to greater improvement in services for middle income levels than for lower levels – i.e., all ships rose but some rose more than others. Their findings demonstrate that in almost all cases, utilities privatization reduces headcount measures of poverty. They conclude:

“The popular perception that privatization is responsible for large increases in inequality and is particularly harsh on the poor is not borne out by the cases considered here A lot of the public disenchantment stems from concerns about price increases resulting from privatization. As we have shown, however, there is no clear pattern concerning price changes, with prices going down in about half the cases. More important, perhaps, is our finding that even if prices went up, their effects were outweighed by the corresponding increases in access that occurred in the bottom or lower half of the distribution.”⁶

2.3 Macroeconomic Studies

There have been far fewer studies of the macroeconomic effects of privatization. This is presumably because of the less straightforward connection between privatization and macroeconomic variables, other than through the government budget, and even there effects are multidimensional. According to Birdsall and Netter (2003), “privatization’s economy-wide effects on the government budget, and on growth, employment, and investment are less well-established” than are the effects on company-level performance.

From a conceptual point of view, however, if the strongly-supported microeconomic conclusions reviewed above are applied, then the effect of privatization *must* be positive at the macro level. A macroeconomy is simply the aggregate of its thousands of individual

⁵ The post-privatization evolution of utilities prices depends on the extent to which they were subsidized under state ownership, and therefore had to be raised to allow the privatized firm to be profitable, versus the increased competition that is generally associated with utilities sector liberalization. The adequacy and proficiency of the post-privatization utilities regulatory environment is also crucial. In those cases where prices rose after privatization, sometimes they rose less than at still state-owned firms. In exceptional cases, there were egregious increases, such as the well-known Bolivian privatized local water utility which increased fees by over 40% to poor customers, resulting in demonstrations, martial law, and expulsion of the private owner – a large multinational engineering company.

⁶ McKenzie and Mookherjee (2003), pp. 22, 38.

enterprises – the accumulation of its microeconomic actors. If the great bulk of individual companies perform better after privatisation, then aggregated, the overall economy must also see greater efficiency, competitiveness, and growth. And indeed, though fewer, most of the macroeconomic studies that have been done point to a positive impact of privatization on macroeconomic performance, as indicated by the following summary quotes:

“There is no doubt that privatization was one of the key elements that helped jump-start economic revival in the countries that were the most aggressive privatizers.” (Kuczynski 2003)

“Privatization either reduced poverty or had no effect on it. . . . Privatization has a very small effect on [income] inequality . . .” (McKenzie and Mookherjee 2003)

“The numbers of workers laid off due to privatization are small . . . relative to the entire workforce. In most cases reviewed the number of new private sector jobs created by liberalization and privatization soon exceeded the number dismissed.” (Nellis 2003)

“The fiscal impact of the reforms seems generally to have been favorable. In addition to aiding macroeconomic stabilization, the privatization process supported a shift in public spending away from expensive debt service obligations and the funding of operating losses in state-owned enterprises (which eventually subsidize middle-income workers and consumers) toward increased social spending (which directly targets the old and the poor).” (McKenzie and Mookherjee 2003)

2.3.1 Employment

In considering the costs of privatizing versus the costs of not privatizing, the employment issue is generally the most sensitive of all. The following studies looked at the effect of privatization on employment.

- Novak (2002) reports on privatization-induced labor force downsizing in the Czech Republic. The total employment of 43 “strategic” companies fell from 340,000 in 1998, ten percent of total non-government employment, to about 280,000 at end-2001, a decline of 18 percent. During this time the National Property Fund privatized 20 of the strategic enterprises. About half of this decline was in privatized companies, but the other half was due to the restructuring of companies in state hands in the interest of preparing them for privatization. Some sectors were more affected than others. Pre- and post-privatization restructuring of banks resulted in an employment reduction of 25 percent. The pre-privatization restructuring of Vitkovice Steel reduced its labor force by 50 percent – with the consent of the unions. The Czech Republic’s close attention to social measures in hard-hit sectors to cushion unemployment effects helps explain its restructuring success. Privatization tender provisions requiring the preservation of a floor employment level, though lower than the level at sale, have also helped gain social acceptance of reform while not hindering privatization.
- Nellis (2002b) surveys employment change in SOEs in a range of countries and concludes that restructuring essential to eliminate chronic losses in SOEs has required substantial labor force reductions, with or without privatization. Among the more flagrant examples were the Argentine railroad, which went from 92,000 to 19,000 employees in pre-privatization restructuring, and the Brazilian railroad, which went from 160,000 to 42,000. Average overstaffing in major Sri Lankan SOEs was 53 percent in 1992. He cites an ILO survey of 27 empirical studies of the effect of privatization on employment which found that in about half there were post-sale job losses averaging about one-fourth of staff size, while in most of the others there was

little change. Again citing the Brazilian railroad example, after privatization employment was further reduced, to 9,700, for a total employment reduction of 94 percent reduction – 152,000 people – from the pre-restructuring level.

- Evaluating Romania's largest long steel producer in a pre-privatization restructuring plan, King (2000) found that though average wages paid to the firm's workers were only 1/18th of wages paid to Western steel workers, labor hours per ton of steel produced at the Romanian firm were thirty times greater than at Western firms. While Romanian steel production should be expected to be somewhat more labor-intensive due to low wage costs, in this case the Romanian firm, instead of exploiting its significant wage cost advantage, actually had higher total labor costs per unit of output than Western firms. This was the case even though employment had already been reduced at this integrated steel producer from about 13,000 to 8,500 workers. A further reduction to 3,000 workers was considered essential for the firm's competitiveness – still at least three times more workers than would have been employed in a competitive Western mill of comparable size.
- McKenzie and Mookherjee (2003), surveying four intensive individual country studies, examined the employment and wage effects of the privatization of major Latin American utilities. They found that in Argentina, which pursued privatization aggressively, it clearly added to unemployment in the short-term, because of substantial prior overemployment at state-owned firms. However, they also found that subsequent expansion of private sector employment in the medium-term absorbed most of these layoffs: "The income losses arising from the layoffs were transitory, lasting a maximum of three years following the privatization." In Mexico, though privatization resulted in layoffs, about half the workers were re-employed in the same sector within one year of privatization. They conclude that with respect to employment effects of privatization, "the medium-term impact was much lower than the immediate impact."⁷
- In a study highly relevant to Egypt, in connection with its overstaffed and loss-generating state-owned textile sector, Bhaskar, Gupta, and Khan (2001) assessed the employment effects of the privatization of Indian jute mills during the 1980s. They found that labor force downsizing occurred in the years immediately following privatization, in the longer term the privatized mills were back up to the employment levels of the mills that remained state-owned.
- Assaad (2002) reviews specific experiences in Egypt, demonstrating that due to often severe overstaffing under state ownership, employment reduction has almost always been necessary both pre- and post-privatization for the enterprise to achieve economic viability. Examples include the El-Nasr General Contracting Company, which underwent six years of pre-privatization restructuring to reduce staff size from 11,300 to 7,900, and the Assuit Cement company, whose post-privatization employment fell from 3,700 to 1,200, facilitated by a generous early retirement scheme.
- Khattab (1999), noting the GOE's policy of absorbing new job entrants from universities by assigning them to administrative and financial positions in state-owned companies, estimated that overstaffing in 220 public enterprises amounted to one-third of total staff.

Summarizing, while the direct effects of privatization on employment are usually negative due to essential restructuring to achieve competitiveness, the impact of privatization on

⁷ McKenzie and Mookherjee (2003), pp. 25, 29, and 38.

overall macroeconomic employment and unemployment has been limited and transitory. Those studies that have adopted a longer time horizon generally have shown that initial negative effects on unemployment of privatization-induced restructuring are reversed by improving economic competitiveness and growth in the medium-term. Again, these results are consistent with theoretical expectations.

2.3.2 Budget

McKenzie and Mookherjee (2003)'s study of public utilities privatization in four Latin American countries looks at fiscal effects. Though noting how difficult it is to come to any firm conclusions in this area, short of estimating a structural macro model, they report basic statistics. In Argentina and Mexico, privatization proceeds were allocated to reducing public debt and increasing social spending, which rose by 2-3 percent of GDP. Privatization proceeds, and the elimination of fiscal transfers to SOEs, also contributed in both countries to significant reductions in their public sector budget deficits in the early 90s. In Bolivia, the "privatization by capitalization" method meant that the government earned no privatization proceeds, but the shares that went into the state pension fund generated dividends which were paid directly to citizens in social support.

2.3.3 Foreign and Domestic Investment

Theory clearly posits a positive relationship between privatization and investment. When privatized, companies can freely adopt innovative product and market strategies, and the perform better in terms of growth and profitability. Consequently, they should be more attractive to both foreign and domestic lenders and investors. Several studies have examined this area.

- The role of FDI in the Czech Republic's largely successful privatization program has been crucial. As Novak (2002) reports, in the Czech Republic during the 1990s almost all major privatizations involved foreign investors. FDI accounted for two-thirds of privatization revenues and about one-fourth of total foreign investment of \$32 billion over the decade. About half of the privatization investments went into utilities (gas, telecommunications, and water), one-third into banking, and the remaining one-fifth was divided between manufacturing and services. These investments have produced rapid production modernization and linking into the investors' international supply chains. The macroeconomic effects were strongly positive. Firms with foreign investment grew almost twice as fast as the total economy in the late 90s. Furthermore, Czech Invest, the state investment promotion agency, estimated that some 500,000 jobs in 10,000 supplier SME's were attributable to companies with foreign investment.
- It is a general conclusion of the empirical literature (see Mihalyi (2000), Smith, Cin, and Vodopivec (1997), and Claessens and Djankov (1999)⁸) that privatization to foreign majority owners, who can plug the firm into global value chains, quickly introduce competitive management and quality systems, and invest in state-of-the-art capital equipment, fare best in post-privatization operating improvement.
- Share issue privatizations (SIPs) in developing economies have had a strong positive effect in promoting the development of capital markets and in encouraging direct investment inflows, largely by Western institutional investors diversifying into emerging markets. According to Megginson and Netter's (2002) estimates, the total market capitalization of major developing country SIPs went from less \$50 billion in 1983 to \$2.44 trillion in 1999. The value of shares traded on developing country

⁸ Surveyed by Megginson and Netter (2002).

capital markets grew from \$25 billion to \$2.3 trillion over the same period. By catalyzing capital markets growth evolution, privatization opens wider business finance channels for the broader economy and opens the way for potentially large indirect employment gains through all of the professional services needed for financial markets.

- Surveying the Polish privatization experience, Blaszczyk (1999) observed that privatized companies had reinvested 10 to 30 percent of their sales annually, compared to state-owned companies investment of 1 to 3 percent of sales. She notes that in the transportation and communications sector, the private sector in 1999 owned only 3.7 percent of the assets of the entire sector, but produced 39% of its value added. Noting the slow pace of privatization of the large industrial companies, she concludes that in the worst cases, particularly railways and mining in Poland, in addition to growing budgetary subsidies, the cost of not privatizing quickly has been a steady deterioration of their performance, creating a vicious circle that makes privatization less and less viable and liquidation more and more likely as the final outcome.
- Galal (1996), focusing on the unfavorable Egyptian savings rate (18% of national income, compared to 25% for fast-growing developing countries), and basing potential improvement on comparison with faster-reforming economies (similar to our methodologies below), estimated that Egypt could have generated an additional 2.4 percent of GDP from privatizing just one-third of the companies then state-owned.

In sum, the finding of the empirical literature is that privatization generally increases both foreign direct investment and domestic savings. Aggressive privatization auctions attract foreign strategic investors and private equity investors, and privatizations through stock markets attract foreign financial investors interested in emerging market opportunities.

2.3.4 Social Welfare and Income Distribution

Privatization is advocated almost entirely for its expected impact on economic growth, with many advocates more or less uninterested in its effects on income distribution. In the most thorough recent survey of the literature on income distribution effects of privatization, intended to address this research shortfall, Birdsall and Nellis (2002) conclude that “most privatization programs have done much more to enhance efficiency than equity”, and in fact the evidence supports the conclusion that overall, the initial effects of privatization are to worsen both wealth and income distribution. Even where voucher schemes have been applied, the rich tend to end up with a disproportionate share of privatized assets,⁹ while post-privatization price adjustments to reflect true economic costs (especially in the case of major utilities) tend to be income-regressive. Nevertheless, as they crucially observe,

“One can be absolutely better off and comparatively worse off at the same time, and normally it makes no sense to forego absolute gains for all because of an increase in relative disparities.”

⁹Russia is generally cited as one of the most extreme case, followed by the Czech Republic. Both experienced rapid privatization in the early/mid 90s carried out by reformist governments through aggressive privatization authorities, and their programs were enthusiastically supported by the IFI/donor community. “Privatization programs and techniques in many transition countries resulted in a mass and rapid transfer of asset ownership from society at large to a small group of agile, daring, thoroughly unscrupulous actors”, and even where overall welfare gain occurred, “small gains for the many were insufficient to curb the resentment over large gains for the few.” (Birdsall and Nellis (2002). Perhaps it should be noted that these authors, long active in the area, fundamentally favor privatization.)

Furthermore, the inverse relationship between economic development at its early stages and income equality is a long-established empirical proposition. As reviewed by Bhalla (2002), Simon Kuznets observed in his seminal mid-50s paper, on the basis of limited data, that poor countries displayed *greater* income inequality than rich countries. Testing this “Kuznets curve” hypothesis more rigorously, Ahluwalia (1976) (according to Bhalla “the first extensive study of inequality and development”) observed that “there is strong support for the proposition that relative inequality increases substantially in the early stages of development, with a reversal of this tendency in the later stages”, but that this occurs not because of increasing impoverishment of the poor, but because “average absolute incomes of the lower percentile groups rise as per capita GNP rises, although slower than for upper income groups.” Bhalla himself found “overwhelming evidence that intra-country inequality worsened” over the last 20 years in developing countries, despite also showing a substantial reduction in overall global poverty.

Birdsall and Szekely (2003), surveying trends in poverty and income distribution in Latin America after a decade of reform, observe that only the most aggressively-reformist country, Chile, managed to obtain the economic growth rates needed to significantly reduce poverty rates over the 90s.

2.4 Overall Conclusions of the Empirical Literature

It is important to be mindful of the significant qualifications that obstruct empirical analyses of the effects of privatization. Privatization takes place in a dynamic environment, where technology is changing and the macroeconomy is subject to various other impacts, so that change in a company’s or the overall economy’s performance is necessarily the result of these other forces too. It would be difficult to isolate these other forces even if adequate data were available to measure them. In addition, household income surveys are infrequent, so that the impact of privatization on employment and wages, beyond the immediate, is hard to measure. This would require tracking the post-privatization fortunes of individual workers, and such data is simply not available on a wide enough scale fully to underpin research conclusions.

However, the empirical record is now extensive, and generally consistent. We can now summarize its findings in the following summary table, organized according to the five major areas of growth and welfare identified in Table 2 above:

Table 3: **Findings of the Empirical Literature**

<u>Conclusion</u>	<u>Comment</u>
1. <i>Employment and wages</i> : Privatization results in workforce downsizing at many privatizing firms (before and after the event), but broader negative employment effects have not in general been demonstrated, and there is evidence that aggressive privatization leads to rapid expansion of employment in the SME private sector.	This conclusion cannot be applied in every case. Offsetting employment gains in the private sector depend on the degree of restriction on market entry. Privatization methods that seek to protect employment have sometimes been successful. Coordinated training and transition programs for laid-off workers have been successful, but not often enough implemented, especially in aggressive privatization environments.

Table 3: **Findings of the Empirical Literature**

<u>Conclusion</u>	<u>Comment</u>
2. <i>Government budget:</i> The positive impact on government budgets of eliminated subsidies, increased taxes, and privatization proceeds have more than offset the costs of assistance to dismissed workers, debt forgiveness, and lost income of profitable SOEs.	Where tax administration and regulatory capabilities are poor, countries delay divestiture of “cash cow” SOEs such as hotels, airlines, and major utilities could have a net negative budgetary effect.
3. <i>Investment:</i> It is clear from the empirical literature that rapidly-privatizing countries attract significantly more private investment, foreign and domestic, into their goods-producing sectors than do slow privatizers.	The argument against privatization in connection with business finance is that state-owned banks can provide important concessional credit to important large and usually state-owned companies. However, in practice this has often amounted to putting good money after bad. Furthermore, the evidence supports the view that the private financial sectors of fast privatizers are more developed and more competitive, and provide more business finance, than those of slow privatizers.
4. <i>Competitiveness:</i> In general, firms that have been privatized become more efficient, more profitable, and more competitive.	This result is very much to be expected from economic behavioral theory, and is not resisted by opponents of aggressive privatization.
5. <i>Social welfare:</i> The record shows that privatization and associated economic liberalization tends to raise average income and reduce poverty. However, economic liberalization typically increases economic inequality for a period – even though all are better off on average, the rich tend to get considerably richer. In public perceptions, the prominence of post-privatization job losses for workers, and cases of higher prices as subsidies disappear, often outweigh the larger aggregate diffused benefits.	The extent of these costs depends greatly on the quality of both the privatization methodology and the post-privatization regulatory structure.

Summarizing, then, we can conclude that according to the extensive empirical literature on privatization, in the first four of the five major areas of sustainable growth, above, the costs of not privatizing clearly exceed the costs of privatizing. The fundamental theoretical expectation – that in reasonably competitive markets, privatization improves company economic performance – can now be considered empirically unambiguous. In the fifth area, social welfare, while privatization (and market-oriented liberalization in general) is likely to increase economic equality, this cost of privatizing may reasonably be considered largely offset by the associated finding that it also seems to raise average income overall and reduce poverty, especially since government has within its power other methods for supporting the disadvantaged and limiting extreme income inequality.

2.5 Approach to the Egyptian Analysis

Having derived the lessons of empirical studies of many developing countries, for the balance of this study we will focus on Egypt. We pursue this analysis through the following areas of analysis and discussion:

- (i) Microeconomic estimation of the direct budgetary costs of not privatizing the remaining unprivatized “Law 203” public enterprises, using a financial markets valuation model. (Section 3)
- (ii) Assessment of the costs of not privatizing the major financial sector players in Egypt, the four state-owned banks and the insurance companies. (Section 4)
- (iii) Evaluation of the cost of not privatizing Egypt’s state-owned utilities and other “economic authorities” (Section 5)
- (iv) Estimation of the effects of privatization on major Egyptian macroeconomic objectives, by aggregating and extrapolating the Law 203 companies data, by looking at Egyptian employment studies, and by comparing Egypt’s performance to that of some other developing and transition economies. (Section 6)
- (v) Discussion of the role of institutions in implementing and facilitating privatization. (Section 7)

These analytical areas outline the remainder of this report.

3. Costs of Not Privatizing in Egypt – Microeconomic Analysis

The Government of Egypt directly manages a substantial share of the Egyptian economy, as summarized in the following table:

	2001/02	% of Tot	% of GDP
<u>Goods & Services</u>	<u>39.4</u>	<u>37.3%</u>	<u>11.1%</u>
Petroleum Products	22.2	21.0%	6.3%
Agriculture, Industry & Mining, Construction, Trade, Hotels & Restaurants, Other Manufacturing	17.2	16.3%	4.9%
<u>Utilities</u>	<u>19.3</u>	<u>18.2%</u>	<u>5.4%</u>
Suez Canal	8.0	7.6%	2.3%
Telecommunications, Electricity, Airlines, Shipping, Water, Other Utilities	11.3	10.7%	3.2%
Finance & Insurance	15.0	14.2%	4.2%
Subtotal Privatizable	73.7	69.7%	20.8%
Government Services	32.0	30.3%	9.0%
Total	105.7	100.0%	29.8%

Source: MOFT (2003), p. 33

All of the items listed above the “subtotal privatizable” row in the above table are commercial services that could be privatized. They represent one-fifth of Egypt’s total economy. This table understates the GOE’s full weight, because it does not take account of its influence on commercial economic management through its ownership stakes in the 500 “joint venture”

companies. Nor does it capture the indirect commercial power the GOE exerts through its ownership of the four public sector banks, which hold half the assets of the Egyptian banking system. Added to this is the substantial economic influence that the GOE can exert, common to all governments, through its own large purchases of goods and services. Altogether, the GOE may well control half or more of the Egyptian economy.

Our microeconomic analysis of the costs of not privatizing focuses primarily on the 175 remaining “Law 203” companies owned by the government, with a view to deriving a precise estimate of the direct budgetary cost to the GOE of not privatizing these companies. We also look at other studies of the performance of companies in Egypt pre- and post-privatization.

The following table summarizes Law 203 companies privatization since inception of the privatization program.

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Totals
Total # transactions:	6	13	12	25	28	32	33	23	11	8	4	195
# Privatizations	6	12	6	18	23	28	21	9	7	4	0	134
# Partial privatizations		1	6	7	5	4	12	14	4	4	4	61
Proceeds (LE millions)	0	664	1216	2791	3148	2358	2785	2476	1093	71	110	16712

Data source: PEO

Egyptian privatization, after getting off to a slow start, achieved respectable results over the five-year period from 1996 through 2000. In its 2001 Article IV consultation report, the IMF welcomed the GOE’s plan to privatize all of the then-remaining Law 203 companies by end-2002. But as can be seen, only a handful of companies have in fact been privatized since then.

Results of Law 203 companies are summarized in Table 22 in Section 6 of this Study.

3.1 Principal Actors and their Privatization Perspectives

Any evaluation of the costs of not privatizing must identify the party or parties from whose perspectives the analysis is performed. The costs of not privatizing must be determined by reference to specified *interests and objectives* of the parties. In the case of the privatization of Public Enterprises in Egypt (“Law 203 companies,” referring to Law 203 of 1992), there are several principal interested parties.

3.1.1 Holding Companies

Law 203 prescribed the immediate commercialization of public enterprises (PEs) as a precursor to their privatization. The law cut them off from direct government subsidies. It established holding companies (HCs), organized by industry, as the owners of the PEs, whose purpose was to carry out their commercialization and to privatize them. Of an original 27, nine holding companies remain today, and they own a total of 174 PEs, including some affiliates that have been partially privatized. As entities with commercial objectives, the holding companies are expected to maximize the value of the companies under their control, much as any shareholder would seek to do. This study therefore, as a first step, assesses

the value of the PEs (and later government-owned banks and insurance companies) as going concerns, from the perspective of their respective shareholders, the HCs.

3.1.2 Government

The Government of Egypt (GOE), as the owner of the holding companies, has an interest in the performance of the public enterprises, because it receives the proceeds of their privatization. But its interests go beyond those of the holding companies. In evaluating the costs of not privatizing, the GOE is also interested in:

- the tax revenues that accrue from the activities of the PEs
- the costs of maintaining the holding companies themselves
- the proceeds that would result from privatization of the enterprises
- the concessions, principally in terms of debt reduction and labor indemnities, that would have to be made in connection with the privatization of many of the loss-making enterprises.

In our microeconomic analysis of Law 203 companies, we focus on are the economic, direct budgetary the costs of not privatizing, calculated from the perspective of the government as the ultimate owner of the PEs.

In addition to these direct economic or budgetary costs, the government is interested in “costs of privatizing”, as reviewed in Section 1.2 above. The most important of these, particularly in the case of loss-making companies, are the effects of any staff reductions and the effects of loss of indirect control.¹⁰ These “costs of privatizing” can be termed welfare and political costs, which are weighed against the costs of not privatizing.

3.1.3 Investors in the Enterprises

The interest of investors is to maximize their return above their cost of capital. The cost of capital is therefore a minimum acceptable return, the investor’s indifference point. While for purposes of projecting potential privatization proceeds we do estimate the value added to the investor above the cost of capital, this value (which would not be gained by the investor or the economy in the absence of privatization) is not included as a cost of not privatizing. Again, the cost of not privatizing is defined as the direct cost to the government as an economic actor in its own right, not from the point of view the overall economy.

3.2 Methodology

For the purpose of estimating the budgetary costs of not privatizing, we have grouped the Enterprises into twelve industry sectors, which we have further divided into loss-making and profit-making enterprises. The result is aggregate analyses of the each sector.

3.2.1 The Model: Objectives

The model has been developed to address the perspectives of the two groups of decision-makers on the side of the *seller*, the GOE: first, the holding companies, as shareholders responsible for commercializing and privatizing the companies under their respective control, and, second, the government.

¹⁰ Despite the intent to commercialize, the GOE imposes price controls on some PEs – most notably in pharmaceuticals, fertilizers, sugar, and tobacco. Any privatization of these firms must be undertaken either with the pricing constraints contractually imposed on the buyers or with the pricing constraints discarded.

The microeconomic model compares the economic effects of a) continuing the companies in each sector as going concerns owned by the state and b) privatizing the companies. The standard of comparison, as consistent with well-established principles of valuation, is the net present value of estimated future earnings with and without privatization. To evaluate a single firm, such an approach requires a) postulation of a business strategy for the “as is” (non-privatization case), and b) postulation of a feasible strategy that would be pursued by private investors seeking to maximize value (privatization case). Cash flows are projected on the bases of the respective strategic assumptions, and net cash flows are discounted to estimate shareholder value in accordance with the standard definition:

$$\text{Shareholder Value} = \text{Corporate Value} - \text{Debt}$$

Sensitivity analyses are then performed on the results. It should be emphasized that value is subjective: each buyer will value the firm uniquely, and a pre-condition for an agreement on price is that the value to the prospective buyer will be greater than the value to the seller.

With a universe of 174 remaining Public Enterprises, it was not feasible to perform such discounted cash flow (DCF) analyses for each company, although several dozen of the companies have been valued on this basis in recent years by holding companies, advisors, or investment promoters. Therefore, we constructed surrogate measures based upon reasonable assumptions that are suitable for evaluating groups of similar companies rather than individual companies. Implicit in this aggregate approach is that the errors produced by the simplifications are roughly symmetrical for each class of companies analyzed; that is, the cases of over-valuation are roughly offset by cases of under-valuation. The basic assumptions have been judiciously chosen with this objective of symmetry in mind, although sensitivity analyses, as in the case of any forward-looking model, are still important, particularly at the industry sector level.

3.2.2 The Model: Explanation of the Steps

The model assesses in sequence the following elements used in the cost of not privatizing calculation:

- 1) the value of the sector *to the holding company sellers* (whose interests are not identical with those of the Government) in the absence of privatization,
- 2) the value of the sector *to the Government of Egypt*, which adds the GOE's tax receipts and subtracts the costs of maintaining the holding companies,
- 3) the opportunity costs to the GOE of not privatizing, which include privatization proceeds and incremental income taxes that would accrue to the government in the event of privatization, less any concessions that may be necessary to sell the firms (principally debt reduction and labor indemnities).

The calculation:

- + Present value of sector's future cash flow (substituted by projected net income), excluding interest, assuming no privatization
- Debt on balance sheet (not including debt to holding company or affiliated companies)
- + Cash on balance sheet
- = **Value of sector to holding company sellers**
- Present value of holding company costs and holding company debt attributable to the sector

+ Present value of future estimated taxes without privatization

= **Value of sector to GOE**

To convert values to costs of not privatizing, we multiply the above value by negative one (-1).¹¹

Last, we add the following opportunity costs of not privatizing:

+ Present value of additional taxes that would be collected (tax opportunity cost) after privatization

- Estimated debt and labor concessions, if any, needed to effect privatization, plus holding company debt that is assumed to be repaid from privatization proceeds

+ Estimated privatization proceeds

= **Cost of Not Privatizing to GOE (present value)**

We again stress that our microeconomic model is focused on the direct budgetary effects of privatization to the GOE. It does not attempt to project benefits to the rest of the economy, which is left to the macroeconomic analysis in Section 6 below.

Nor is the value added from privatization that is captured by the investor rather than by the government included in this estimate of the cost of not privatizing. Nevertheless, the model does provide an estimate of the net benefit to the investor, which is the present value of net income after privatization above the investor's threshold rate of return (his weighted average cost of capital) less the amount of such present value that is captured by the seller (the GOE) as privatization proceeds.

3.2.3 Key Assumptions

There are several important assumptions and rationales that underlie this straightforward approach.

- i. The firm will be operated as a going concern, whether or not it is privatized. This is usually accurate, given the government's reluctance to liquidate even the weakest firms. In cases where liquidation is the likely course, liquidation proceeds will often yield a negative value, particularly because of the cost of paying indemnities to employees or loan writeoffs by government-owned banks.
- ii. In accordance with usual practice, the amount of balance sheet debt is considered a present value and deducted from the value of the firm. Interest expense is therefore disregarded (added back to net income) in the analysis. Treating debt as a present value implies that it bears a market rate of interest, thereby eliminating the distortions in cases where interest is subsidized (almost always by a government-owned holding company or a government-owned bank). Similarly, cash on the balance sheet is also treated as a present value, and therefore represents an addition of the value of the firm.
- iii. Cash flow projection under continued state ownership:
 - Revenues are projected on the assumption that the geometric mean of real growth rates for the sector for 1998-2002 will continue in the future.

¹¹ If a sector's value to the GOE without privatization is positive, then the cost of privatizing it is *reduced* by that amount; if the sector's value to the GOE is negative, then the cost of not privatizing is *increased* by that amount.

- In the case of firms generating negative cash flows, it is assumed that neither the enterprise nor its owner (the HC) has the cash resources necessary to effect a turnaround, whether that turnaround involves acquiring new capital equipment, developing new markets, or introducing new technologies. Therefore, it is assumed that recent cash flow results¹² will continue in the future under state ownership. This approach greatly simplifies the analysis, and also tends to be generous to the case for continued public ownership: rather than remain stable, it is in fact more likely that the cash flow situation will continue to deteriorate in the absence of new investment.
 - Similarly, in the case of sectors generating positive cash flow from operations, it is assumed that recent performance trends will continue in the future.
 - The assumption that recent net income trends will continue under state ownership incorporates capital investment assumptions. In the case of loss-making firms, the assumed absence of new capital investment (due to unaffordability) helps account for their continued losses. In the case of profit-making firms, which normally show significant amounts of depreciation, projecting their net income forward captures ongoing capacity for capital investment. Therefore, needed capital investment is not an additive element, but rather is captured in the cost of not privatizing as estimated.¹³
- iv. Cash flow after privatization:
- Sectoral net income / revenue is projected in accordance with the recent experience of private companies in the sector, taken from *Business Week* industry data for 2001-02.
 - If a sector's performance under state ownership already exceeds these standards, no performance improvement is assumed after privatization unless there is specific justification for doing so.
- v. Distinctly anomalous data are ignored as either erroneous or resulting from special conditions inconsistent with long term trends. For example, if past revenues drop by 50% for two years and then re cover to near the original level, the two low years are disregarded.
- vi. The model employs the following base case parameters, all of which can be subjected to sensitivity analyses by industry sector:
- | | |
|---|-------|
| - Average inflation rate, 1998-2002 (Economist Intelligence Unit (EIU)) | 3.2% |
| - Nominal capitalization rate (weighted average cost of capital) | 18% |
| - Projected inflation rate, 2004-07 (EIU) | 3.2% |
| - Real capitalization rate | 14.2% |

¹² More precisely, as a surrogate measure of cash flow, the average net income / revenue over 1998-2002.

¹³ An alternative approach would be to allocate the cost of not privatizing into two components: (i) a portion reflecting underinvestment in technology under state ownership, and (ii) a portion reflecting the government's less efficient operation of the firm. Our approach combines these two influences into one relative cash flow measure.

- Average tax rate on future income	20%
- Privatization proceeds as percent of value to buyers of loss-making sector firms	30%
- Privatization proceeds as percent of value to buyers of firms in profit-making sectors (assumes greater competition among prospective bidders)	60%
- Concessions (primarily debt and labor) needed to consummate privatizations and therefore subtracted from privatization proceeds, as percent of negative value of loss-making firms (based on case studies)	50%
- Egyptian economy real growth rate, 2004-07 (EIU)	4.2%

3.3 The Results: Costs of Not Privatizing

3.3.1 Estimation Results

In Table 28 of the Statistical Appendix below, we provide the summary results, for the 174 remaining PEs across twelve sectors, for the budgetary costs of not privatizing. We determine the following:

Value of sector to sellers (the respective holding companies) = LE - 4.1 billion

That is, collectively, the Law 203 companies have a negative value, a significant conclusion in its own right. Despite LE 32 billion in total sales – 1/12th of Egypt’s GDP – these companies in the aggregate are an economic drain both to the GOE and the Egyptian economy.

Allocating this result between the loss-making companies and the profitable ones, we estimate that the loss-making companies, with LE 5.5 billion in annual sales, impose a burden of LE 13.6 billion in present value terms on their holding company shareholders, while the profitable companies, with LE 26.7 billion of sales, add LE 9.5 billion in value.

To determine the value of the PE’s to the GOE, we adjust the value to the holding companies, above, LE - 4.1 billion, with the following:

- Present value of holding company costs and holding company debt attributable to the sector	LE - 8.0 billion
+ Present value of future estimated taxes without privatization	LE 3.1 billion
= Value of Public Enterprises to Government of Egypt	LE - 9.0 billion

The cost of operating the holding companies and their debt, LE 8 billion, represent a substantial detraction of value to the GOE. After adjusting for taxes received by the GOE from the PEs, the total value lost by PEs and their holding companies is LE 9.0 billion.

Loss-making companies account for 16.4 billion of the negative value, while the profitable companies add 7.4 billion of value to the GOE. Even the profitable companies make only a modest value contribution when holding company costs are taken into consideration.

To convert values to costs, we multiply the above values by minus one (-1):

Cost of Public Enterprises to the GOE LE 9.0 billion

i.e., since the gross budgetary contribution of the PEs and HCs to the GOE is negative, this is a positive cost of not privatizing.

We then add the following opportunity costs of not privatizing:

+ Estimated privatization proceeds	LE 21.0 billion
- Estimated debt and labor concessions to privatize	LE 9.2 billion
+ Projected taxes of PEs as privatized companies	LE 6.9 billion
= Cost of Not Privatizing to GOE (present value)	LE 27.7 billion

When we separate loss-making companies from profit-making companies, we find that the cost of not privatizing the profitable companies (LE 17.0 billion) *exceeds* the cost of not privatizing the loss-making companies (LE 10.7 billion). This is not surprising when we note that the profitable companies represented LE 26.7 billion of sales in the year ended June 30, 2002, while the losing companies represented only LE 5.5 billion. Clearly, a very high price is being paid for the relatively minor sales of the losing companies. Nevertheless, *the cost not privatizing the profitable companies is also substantially positive*, once the opportunity costs of not privatizing are taken into account.

3.3.2 Assessment of Privatization Proceeds Estimate

As seen in the preceding presentation, privatization proceeds are an important part of the total cost of not privatizing, so it is useful to evaluate our study's LE 21.0 billion proceeds estimate by another standard. The PEO's estimate of LE 23 to LE 25 billion of additional privatization proceeds potential was based on a price/earnings (P/E) ratio analysis. The average P/E ratio on the Cairo and Alexandria Stock Exchange (CASE) for the twelve months through July 2003 was 7.6.

3.3.3 Privatization Proceeds Calculation: Allocation of Added Value

In a perfect market, as a consequence of competition among prospective buyers, the benefit of the expected value added under private ownership, in excess of private market's cost of capital, would accrue to the seller. But markets are never perfect, and therefore we can expect that a price will be negotiated between the value of the company to the seller and the value to the buyer, with each participating in the benefit of the value expected to be added by the buyer. Where in that range a price will be agreed is largely a function of the degree of competition that the seller succeeds in generating among buyers.

We have assumed that the seller will benefit from 60% of the expected value added after privatization from the sale of profitable firms, but only from 30% from the sale of loss-making firms. This reflects the assumption that profitable firms will attract more investor interest (and therefore competition) than losing firms.

In addition to the benefits of privatization to the Government of Egypt, as represented by the cost of not privatizing, our sectoral analysis indicates that LE 4.3 billion of additional value will accrue to the benefit of investors, bringing the total microeconomic value added by privatization to LE 32.0 billion. This entire amount represents a direct benefit to the Egyptian economy. Further indirect effects are described in this study's macroeconomic analysis.

3.4 New Private Capital Investment

Based on the difference between projected post-privatization revenues and revenues without privatization, and on the assumption that depreciation will continue to average 5% of revenues for these companies, we estimate that the present value of projected post-privatization new investment is LE 8.5 billion.¹⁴

¹⁴ Keeping in mind, as discussed in Footnote 13 above, that in our analysis the cost of this new investment is captured in projected post-privatization cash flow in the depreciation rate, and therefore

Certainly this LE 8.5 billion will not be invested entirely upon privatization. It is reasonable to assume that most of this amount would be invested over a period of five to seven years after privatization. For comparison, a sample of 56 past privatizations prepared by the PEO shows LE 1.3 billion of investment over an average post-privatization period of about three years.

Many of the firms have been starved for capital because their cash flow has been diverted to paying for excess labor and meeting other “social” objectives encouraged by their government shareholder. The result, with the passage of time, has been to seriously jeopardize the existence of many of these firms. The spinning and weaving sector is the most unambiguous example. If the firms are to both survive and grow, which on balance is the potential, new capital investment is essential.

3.5 Conclusions Regarding Law 203 Companies

The budgetary cost of not privatizing the Public Enterprises – that is, the cost of inaction– is about LE 28 billion in present value terms. This is the direct benefit to the budget of the GOE that can be expected from Law 203 companies privatization. It represents approximately 100% of the 2002 fiscal year GOE financing requirement, and exactly two-thirds of the currently projected budget deficit for the fiscal year ending June 2004. Though this benefit represents both immediate gain (privatization proceeds) and gain over time (reduced annual PE and HC operating losses), the quicker privatization proceeds, the quicker will this benefit be realized.

Most of the PEs are badly in need of new capital investment, almost all of which will be forthcoming only from private investors. Indeed, such investment is essential for achieving industry profitability standards and revenue growth. Without it, the firms will continue to decline. It is estimated that, in addition to the LE 28 billion benefit to the GOE, an additional 8.5 billion of new capital will be invested in the firms by their new owners over a five- to seven-year period following privatization.

Moreover, privatization opens the door to much needed foreign investment so that Egypt is not forced to rely upon its own limited resources. Of the LE 16.7 billion of privatization proceeds in Egypt to date, 40% represents foreign investment, and there has been an estimated LE 4 billion in post-privatization investment.

3.6 Pre - and Post-Privatization Performance of Egypt’s Privatized Companies

As we saw in the survey of the empirical literature above, the vast majority of studies of company performance demonstrate that it improved following privatization, as would be expected in theory. We wanted to look at similar studies that have been done for Egypt. The fact is that few such studies have been done, and their results are somewhat mixed.

Khattab (1999) assessed operating results for 28 privatized companies in Egypt in 10 sectors. He found that sales increased in 71% of them, profitability in 68%, average salaries in 96%. Bank debt relative to revenues decreased in 82% of the companies. “These achievements show that the Egyptian privatization program has successfully confronted the challenges so far.” (p. 25)

The PEO (2003) prepared performance parameters from data in their possession for a sample of 56 privatized Egyptian companies. They reported that in 75% of them, operating revenues and profitability improved after privatization, that investment in these companies rose by 42%, and that external debt declined by 50%. On the other hand, El Dessouki

is not an additive expense to the buyer that would be deducted from expected value added and privatization proceeds.

(2003), who analyzed seven Egyptian companies before and after privatization and found little or no improvement in performance.

These ambivalent conclusions for Egypt are not unique. One reason is that the experience with privatization in Egypt is still relatively short. As reviewed by Megginson and Netter (2002), Erlich et. al. (1994) found that mixed effects in changing from state to private ownership were not unusual in the short run, but that in the longer run significant increases in productivity and cost efficiency were unambiguous.

Furthermore, other studies have shown post-privatization operating performance improvement in some countries to be weak or inconclusive – for example Boubraki and Cosset's (1999) study for Africa, and Harper (2000) for the first wave of privatization in the Czech Republic.¹⁵ But these findings were in themselves consistent and instructive: they were attributed to poor regulation and continued prevalent statism. Harper (2000) found that the second wave of privatization in the Czech Republic, which took place after the overall economic reform program had significantly progressed and a competitive business environment was established, generated clearly positive performance results. As expressed by Galal (1996), "Like a chain with several links, reforms only work when all of the pieces are connected." (p. 15)

Another reason for the mixed results is the mixture of privatization methods in Egypt. As summarized by Assaad (2002), of the roughly 100 majority-privatized companies, fewer than one-third have been sold to outside anchor investors. More than one-third of the sales have been to Employee Shareholder Associations (ESAs), and the remainder through public offerings of shares. It now is a well-established conclusion of the empirical literature that "concentrated ownership" privatizations to outside investors produce the strongest performance improvements. In "diffused ownership" privatizations, majority privatizations through public share offerings generally have also improved performance, but other methods have produced much poorer results. Privatization to insiders (including employees), or privatization which left insiders in control, produced far weaker performance improvement gains than other methods.¹⁶ A number of Egypt's privatizations can be so characterized.

However, there should be no doubt whatsoever that over time, companies perform substantially better in entrepreneurial private hands than they do in government hands. The finding that privatized companies have better operating performance than state-owned companies is entirely consistent with economic theory and, with the empirical evidence we now have as reviewed above from all over the world, should be accepted as axiomatic. Certainly the somewhat mixed results observed for privatized Egyptian companies so far should in no way be used to justify gradualism in privatization policy in Egypt.

4. Egyptian Banking and Insurance Sector Analyses

The Egyptian financial sector is large by developing country standards. For example, total bank credit outstanding is equal to about 95 percent of GDP, and annual bank lending is about 10% of GDP, magnitudes which are comparable those of relatively advanced developing countries like Indonesia or South Africa. However, Egypt's financial sector is dominated by state-owned entities. The GOE retains 100% ownership of the four largest banks in Egypt, which combined represent about half of the banking sector. It also still holds

¹⁵ From the Megginson and Netter (2002) survey

¹⁶ See Megginson, Nash, and van Randenborgh (1994), and, as reviewed in Megginson and Netter (2002), Frydman, Pistor, and Rapaczynski (1996), Frydman, Gray, Hessel, and Rapaczynski (1999), Frydman, Hessel, and Rapaczynski (2000), Pistor and Spicer (1996), Weiss and Nikitin (1998), Claessens and Djankov (1999), and Earle (1998).

interests in 46 “joint venture” commercial banks. It also owns the four largest insurance companies, and the state pension fund represents essentially the entire institutional pension sector. Privatization of at least some of these institutions has been long-planned, but not consummated. The GOE formally committed to privatize at least one of the state-owned banks in connection with its IMF standby facility of 1997. GOE statistics show that 67 percent of the total contribution of the financial services sector to GDP is accounted for by entities under public sector control – by far the largest such contribution of any GDP sector.¹⁷ The following table summarizes sources of funds to the Egyptian economy.

Table 6: **Sources of Finance in Egypt**¹⁸
Flows, Domestic Credit, 2001/2002, LE millions

Lender / Investor	State	Private	Total Finance	% of Total	% of GDP
Banks ¹⁹	22574	14824	37398	44.1%	9.9%
Nonbanks	29320	410	29730	35.1%	7.8%
Insurance Companies*	1391	410	1801	2.1%	0.5%
State Insurance Funds	18318		18318	21.6%	4.8%
Post Office Savings	3804		3804	4.5%	1.0%
National Investment Bank	5807		5807	6.9%	1.5%
Capital Markets		17635	17635	20.8%	4.7%
Total	51894	32869	84763	100.0%	22.4%
% of Total	61.2%	38.8%	100.0%		
% of GDP	13.7%	8.7%	22.4%		

Data Sources: CBE (2002), MFT (2003), EIU (2003), CMA interview. Fiscal year ending June. * 2001 data

State-owned commercial banks represent over half of total banking sector lending. The nonbank sector is large, contributing 40% of the economy’s total finance, but it is entirely dominated by state ownership, primarily through the State Insurance Funds (SIFs), who channel virtually all of their funding to the National Investment Bank (NIB). On the other hand, the capital markets are entirely a private sector phenomenon, and they contribute about one-fifth of total funding. Adding together government dominance of the banking sector with its near-total ownership of the nonbank sector, the state controls about three-fifths of Egypt’s supply of loanable / investable funds.

Total financial assets outstanding of the financial sector, from which the flow statistics of Table 6 are drawn, are as follows:

¹⁷ See Central Bank of Egypt, *Annual Report 2001/2002*, p. 54.

¹⁸ In order to isolate original sources of funds and avoid double counting, claims of one lender/investor on another lender/investor in the table are netted out of the latter’s claims. For example, virtually all of the assets of the SIFs and PO savings bureaus are deposited in the NIB. Therefore, the entry for the NIB is net of these line items – it represents funds that the NIB raises and on-lends from other sources. (The NIB’s gross lending was some LE 28 billion – the sum of funds provided by the SIFs, Post Office Savings, and its own other sources.) Similarly, (i) the capital markets total is net of securities purchases by nonbanks (which are included in their totals), and (ii) the banks total is net of changes in bank deposits of the nonbanks.

¹⁹ Bank finance is net of changes in government deposits, in order not to overstate the government sector’s use of funds. Gross bank claims rose by LE 60 billion in 2002, but government deposits in the banking system rose by LE 23 billion, leaving the LE 37 billion in total net domestic credit provision by the banking system reported in the table. (LE 12 billion of this total was loaned to government).

Lender / Investor	State	Private	Total Assets	% of Total	% of GDP
Banks	217.4	142.7	360.1	49.5%	95.0%
Nonbanks	247.0	5.2	252.3	34.7%	66.6%
Insurance Companies	15.7	5.2	20.9	2.9%	5.5%
State Insurance Funds	157.7		157.7	21.7%	41.6%
Post Office Savings	17.1		17.1	2.4%	4.5%
National Investment Bank	56.6		56.6	7.8%	14.9%
Capital Markets*		114.7	114.7	15.8%	30.3%
Total	464.4	262.7	727.1	100.0%	191.9%
<i>% of Total</i>	63.9%	36.1%	100.0%		
<i>% of GDP</i>	122.6%	69.3%	191.9%		

Data Sources: Notes to the preceding table apply. * Market capitalization, net of securities held by other listed lender/investors.

Total assets of the Egyptian financial system are about \$150 billion. This can be compared to roughly \$250 billion for South Africa (a country with two-thirds Egypt's population and roughly the same GDP), and about \$30 billion in Nigeria (a country with 1.5 times Egypt's population and one-half its GDP).

The following table shows that government is also a very large user of credit, absorbing one-third of the total finance of the Egyptian economy in 2002.

Sector	Amount	% of Total	% of GDP
<u>Government</u>	<u>27716</u>	<u>33.2%</u>	<u>7.3%</u>
Administration	23601	28.3%	6.2%
Public Enterprises	1958	2.3%	0.5%
Economic Authorities	2157	2.6%	0.6%
<u>Private Sector</u>	<u>55764</u>	<u>66.8%</u>	<u>14.7%</u>
Business	46674	55.9%	12.3%
Households	9090	10.9%	2.4%
Total	83480	100.0%	22.0%

Data Sources: CBE (2002). Fiscal year ending June. Errors and omissions and different data sources account for variance between totals in sources and uses tables.

Against this overall picture of the flow of funds, in this Section 4 we focus on the potential costs of not privatizing in Egypt's financial sector. We first cover the state-owned banks, then the state-owned insurance companies, evaluating their performance and prospects and estimating the budgetary cost of their continued government ownership. We conclude with an assessment of the overall indirect effects, in terms of the flow of finance to businesses, of privatizing versus not privatizing these intermediaries.

4.1 Government Role in Banking in Egypt

There are 62 banks in Egypt, which do not include the National Investment Bank, a development bank financed primarily by social insurance deposits, or the postal savings system. The structure of the Egyptian banking system is charted in Appendix 2, Figure 9 below. The four public sector commercial banks, which are wholly owned by the government – National Bank of Egypt, Banque Misr, Banque du Caire, and Bank of Alexandria – dominate commercial banking in Egypt. The public sector banks' share of assets has remained steady at 52% of all banking assets in recent years. When specialized banks²⁰ are excluded, leaving what are conventionally considered to be comparable commercial banks²¹ that address the corporate or consumer markets, the public sector banks' share of assets increases to 58%.

Table 9: Banking Sector Assets			
<i>LE millions, net of loan loss provisions, 30-Jun FY End</i>			
	2000	2001	2002
Total, all banks	354,784	397,162	459,596
Public sector banks	184,822	209,533	240,446
<i>Public Sector banks %</i>	<i>52.1%</i>	<i>52.8%</i>	<i>52.3%</i>
Comparable banks only	318,760	357,600	415,297
<i>Public Sector banks %</i>	<i>58.0%</i>	<i>58.6%</i>	<i>57.9%</i>

Data sources: CBE *Annual Reports*, HC Brokerage *Banking Industry Review*; financial statements of Housing and Development Bank

A similar story is told by an analysis of the deposits. The four public sector banks consistently represent 58% of all banking deposits and 62% of commercial bank deposits.

Table 10: Bank Deposits			
<i>LE millions, 30-Jun FY End</i>			
	2000	2001	2002
Total, all banks	260,439	291,224	340,868
Public sector banks	153,494	171,417	196,264
<i>Public Sector banks %</i>	<i>58.9%</i>	<i>58.9%</i>	<i>57.6%</i>
Comparable banks only	243,344	272,161	318,544
<i>Public Sector banks %</i>	<i>63.1%</i>	<i>63.0%</i>	<i>61.6%</i>

When deposits in the National Investment Bank and the Post Office are included, *the total share of gross financial deposits held by public sector entities (including specialized banks) was 72% as of the end of June 2002.*

²⁰ Arab Land Bank, Industrial Development Bank, and Bank for Development & Agricultural Credit, Export Development Bank, Housing and Development Bank. The latter two, while performing quasi-official roles, are publicly listed and are classified as “business and investment banks” by the CBE.

²¹ This does not conform to the CBE's definition of “commercial banks,” which includes “business & investment banks” in a separate category. These are nevertheless deposit-taking institutions that act as commercial banks in the usual sense of the term, and therefore we have classified them accordingly.

Furthermore, this figure counts “joint venture banks” (meaning joint public and private ownership) as private institutions, although some are majority-owned by public entities. The public sector banks have shareholdings in twenty-four, twenty-one are partially owned by other public companies, and ten have some degree of direct government ownership.

The stated intent of the government is to reduce or eliminate the shareholdings of public entities in the public sector banks. We conservatively assume that the discipline imposed by private shareholders is such that the performance of these joint venture banks, whether currently performing well or not, will not change, on balance, after the partial government shareholdings are sold. Therefore, the joint venture banks are not included in the cost-of-not-privatizing analysis. Though this assumption is not valid for all individual cases,²² most joint venture banks are performing distinctly better than the public sector banks, so that excluding them from our costs of not privatizing analysis is not unreasonable.

4.2 Performance of the Public Sector Commercial Banks

4.2.1 Comparative Earnings Indicators

In terms of return on assets, the public sector banks performed as follows from 2000 to 2002, according to their published accounts in their annual reports:

Table 11: Return on Assets of Public Sector Commercial Banks			
<i>LE millions</i>			
	2000	2001	2002
Public Sector Banks:			
Assets	184,822	209,533	240,446
Net income	938	863	625
Net Income/Average Assets	0.51%	0.44%	0.28%
All Other Banks:			
Assets	169,962	187,629	219,150
Net income	1,947	1,761	1,549
Net Income/Average Assets	1.2%	1.0%	0.8%
Comparable banks only ²³	1.3%	1.1%	0.8%
Five listed Egyptian banks ²⁴	2.0%		
USA banks ²⁵	1.3%	1.3%	1.3%
Five major UAE banks ²⁶		2.1%	

The profitability of the four Public Sector Banks compares poorly to that of other banks in Egypt as well as to banks outside Egypt. Furthermore, it appears that the performance of the public sector banks is overstated, because of underprovisioning for bad loans.

Similarly, the net interest margins of the Public Sector Banks are substantially less than that of private sector banks and banks elsewhere:

Table 12: Net Interest Margins			
<i>LE millions</i>			
	2000	2001	2002
Public Sector Banks:			
Net Interest	1,803	1,476	1,743
Net interest / total assets	0.98%	0.70%	0.72%
Average net earning assets	112,671	122,778	130,787
Net Interest Margin	1.7%	1.25%	1.38%
Five listed Egyptian banks	3.0%		
579 banks worldwide ²⁷		2.3%	
Five major UAE banks		3.0%	
USA banks	4.0%	4.1%	4.0%

One reason for the lower net interest earnings of the public sector banks may be their more liberal rescheduling practices for debt in default – particularly their loans to public enterprises – at low and therefore presumably more affordable interest rates. Such rescheduling also tends to disguise chronically bad loans, by removing them from nonperforming status.

4.2.2 Loan Loss Provisions

At the respective June 30 fiscal year-ends, the loan loss provisions of Egyptian commercial banks were as follows:

²² For example, a government shareholder's inability to increase capital in a bank in which it holds a controlling stake may impede the ability of the bank to take advantage of market opportunities. By selling its shares to a capable private buyer, the government could presumably capture some of that added value in the price at which it sells the shares.

²³ Omitting specialized banks, the Export Development Bank, and the Housing and Development Bank

²⁴ Commercial International Bank (CIB), National Société Générale Bank, Watany Bank, Egyptian American Bank, Misr International Bank ; in *Egyptian Banks: Boarding the Retail Bandwagon*, HC Brokerage, May, 2001.

²⁵ Federal Reserve Bank of New York, *Quarterly Report, First Quarter 2003*. All US banks except the top ten bank holding companies, which are not comparable to the Egyptian public sector banks because of size and nature of activities.

²⁶ Commercial Bank of Abu Dhabi, Abu Dhabi, Emirates Bank International, Mashreq Bank, National Bank of Abu Dhabi, and Bank of Ras -Al-Kaimah. Major Saudi banks show returns in a similar range; from *Moody's Peer Comparison, Investment Grade Global Banks*, Moody's Investor Services, New York, April 2003.

²⁷ Moody's Peer Comparison, Investment Grade Global Banks, Moody's Investor Services, New York, April 2003

	Total Loans	Provisions	% Loans
Public Sector Banks, 2002 ²⁸	133,591	14,118	10.6%
All Other Banks, 2002 ²⁹	132,520	21,751	16.4%
Public Sector Banks, 2001	122,066	12,542	10.3%
All Other Banks, 2001	119,404	18,658	15.6%

Provisions of the public sector banks are less than two-thirds of other banks in Egypt, and only about half of the provisions of other commercial banks (according to the CBE classification). Most observers agree that the public sector banks are under-provisioned, but no objective assessment of their loan portfolios have been made publicly available. Certainly their provisions are less than for other classes of banks in Egypt. While it is possible that the public sector banks have stronger loan portfolios than the other banks and therefore they require fewer provisions, this seems unlikely. Only a detailed examination of the loan portfolios can determine the true situation, but as analyzed in the following two sections, we think that in fact the provisions of the public sector banks are more likely to be significantly understated – that their portfolios are weaker, not stronger, than those of other banks.

4.2.3 Public Enterprises and Loan Provisions

The public sector banks hold most of the loans to the public enterprises (Law 203 companies), which represent about 21% of the four public sector banks' outstanding loans, while almost all the remainder is held by the National Investment Bank. Total borrowings of PEs were LE 32.0 billion as of June 30, 2002 (including LE 4.5 billion of holding company borrowings); approximately LE 28 billion of this was owed to the four Public Sector Banks, with most of the remainder to the National Investment Bank.³⁰

The public sector banks appear to consider that their loans to the Law 203 companies have the implicit guarantee of the government. Because lending by public sector banks has been used as a substitute for government subsidies, which are barred by Law 203, the banks may well have implicit or explicit assurances that their losses will be limited. From these banks' perspective, as corporate entities, this would justify a liberal loss provisioning criterion for PE loans. But this is another way of saying that the banks are depending upon subsidies from their shareholder to maintain the health of their portfolios, and the objective of this analysis is to assess the cost of owning these banks from the perspective of the GOE as shareholder and tax authority. From the perspective of this study, the means by which the financial "holes" created by government-induced lending practices are plugged – whether by the government replenishing impaired capital, by the government being forced to accept a lower price for the eventual sale of the bank, or by the government itself repaying the loans – is

²⁸ Annual reports of the respective banks; some figures for Bank of Alexandria for 2002 are estimates, given that the Bank has not yet published its complete 2002 results.

²⁹ Central Bank of Egypt, *Annual Report 2001/2002*, page 41.

³⁰ PEO, communications of November 17 and 18, 2003. Total reported by all banks as outstanding to the PEs and HCs as of the same date was LE 30.9 billion. The small discrepancy is probably explained by borrowings from foreign banks and by variations in conversion rates for foreign currency loans.

secondary. As long as these banks, under state ownership, continue such lending behavior to the PEs, their prospective cost of not privatizing will grow.

A 1995 study of the excess debt of public enterprises³¹ concluded that of the LE 36 billion debt at the time, approximately 50% was excess – that is, cash flows of the borrowing enterprises were insufficient to finance it. With many of the stronger PEs privatized in the 1996-2000 wave, PE debt outstanding today is unlikely to be more serviceable than it was in 1995. The spinning and weaving sector, for example, represents debt of LE 7.6 billion – more than 25% of the PE debt total. With annual revenues on the order of LE 2 billion, and 27 of 29 of them losing an average of nearly 25% of revenues, the sector is in a position to service almost none of its debt. *Moreover, the WTO agreement to eliminate textile quotas worldwide from 2005 presents Egypt simultaneously with a threat and an opportunity. If the spinning & weaving industry is revitalized with new capital investment, Egypt can profit from its natural advantages and grow its international market share. But if the industry is not revitalized, Egypt's potential will be relinquished to China and other countries. Time is running out.*

4.2.4 Estimate of Under-Provisioning

Assuming conservatively that 50% of the approximately LE 24 billion of outstanding loans from the public sector banks to the PEs are unserviceable, or LE12 billion, *then the unserviceable loans outstanding to the PEs are equal to almost 100% of the four banks' total loan loss provisions*. The analysis assumes that the approximately LE 4 billion outstanding to the holding companies is serviceable form privatization proceeds.

If the estimated 79% of the Public Sector Banks' loan portfolios outstanding to other borrowers were provisioned at the 12.0% average of all other banks, then additional provisions of LE 11 billion would be required. This hypothetical under-provisioning compares to total equity of the four Public Sector Banks of about LE 9.2 billion as of June 30, 2002.

Table 14: Estimate of Underprovisioning			
<i>Public Sector Banks, LE billions, Jun-02</i>			
	Total Loans	Provisions	% Loans
Total loans and actual provisions	133.6	14.1	10.6%
Public Enterprise and HC loans & needed provisions	28.0	12.0	42.8%
Remaining loan portfolio and needed provisions	106.1	12.7	12.0%
Total loans and required provisions	133.6	24.7	18.5%
Additional provisions required		10.6	7.9%

That is, on these conservative assumptions, provisions should have been 75% higher at end-June 2002, or 18.5% of the total loan portfolio, not 10.6%. If instead we not unreasonably assume that provisions on the 79% of the loan portfolio that is not attributable to the PE's and their holding companies should be approximately equal to the average level of non-performing loans for all other banks at June 30, 2002,– 16 percent – then the estimate of under-provisioning would rise to LE 17 billion, and total provisions would need to

³¹ "Public Enterprise Debt and Privatization," prepared for US Agency for International Development by KPMG Peat Marwick (1995).

be more than twice as high, at 24% of the total portfolio. This analysis conservatively assumes that contingent liabilities are adequately provisioned.

An indirect indicator of underprovisioning by public sector banks is the pattern of correlation over time in their financial statements between earnings and loan loss provisions. This suggests that provisioning may be constrained by profit-reporting objectives.

4.3 Costs of Not Privatizing the Public Sector Banks

4.3.1 Estimating the Cost of Not Privatizing

We now apply to the public sector banks our model of the budgetary costs of not privatizing, using largely the same logic as for the Law 203 companies. Different scenarios are possible, based principally on the projected rate of return that the banks would earn under private ownership (which affects projected privatization proceeds and after-privatization tax receipts), and on the assumed amount of over-valuation of the loan portfolio.

We assume that with or without privatization, the banks' assets will grow at 4.2% per annum, the assumed real growth rate in the economy. This represents a lower rate of real growth than the public sector banks have experienced in recent years, 7.2%, which is not sustainable because of the capital constraints the banks are now facing. The assumption of unchanged growth after privatization is conservative because one might reasonably expect recapitalized privatized banks to grow faster.

The principal source of value added by the privatized banks is the assumed increase in the return on assets to 1.3%, the ROA actually achieved by Egyptian private sector banks in 2000.

The calculation for the public sector banks:

- + Aggregate present value of the four banks' future net income, assuming no privatization.³²
- Understatement of the amount of provisions for bad loans
- + Present value of future estimated taxes without privatization
- = **Gross value of Public Sector Banks to GOE**

To convert values to costs, we multiply the above values by minus one (-1).

We then add the following opportunity costs of not privatizing:

- + Estimated privatization proceeds
- Estimated concessions, if any, needed to effect privatization; this primarily represents bad loans that the GOE must retain in order to sell the banks
- + Additional profit taxes that would be collected after privatization
- = **Cost of Not Privatizing Banks to GOE** (present value)

The following table presents three scenarios, ranging from one in which the GOE does not increase provisions, to one in which it increases them by 150%, as the analysis in the preceding section suggests could be appropriate :

³² For banks, unlike industrial companies, interest expense, the vast majority of which is a "cost of sales", is of course included in net income

Scenario	Increase	Cost of Not Privatizing Calculation			
		- Value of Banks to GOE	+ Privatization Proceeds	+ Tax Cost	= Cost of Not Privatizing
Current provisions	0	9.3	16.7	4.0	11.4
Correct provisions: +100%	14.1	-4.8	5.2	5.9	15.9
Current provisions + 150%	21.2	-11.9	1.2	5.9	18.9

While an increase in loan provisions is a non-cash accounting entry, its purpose is to reflect the present cash value of the loan portfolio. The weaker the true state of the loan portfolio, the greater will be the burden to the government of retaining ownership and not privatizing. The estimated budgetary cost of not privatizing the public sector banks is estimated between LE 11 to LE 19 billion.

4.3.2 Prospective Increased Capital Needs

A private sector buyer would need to invest in bank capital to bring it up to capital adequacy standards. A detailed assessment would require specific estimation of capital requirements on the basis of the Basel capital adequacy conventions for commercial banks. For the purposes of this paper, we will estimate the capital requirement as a function of total assets.

For 579 banks worldwide included in the Moody's (2003), the mean equity as a percentage of total assets was 7.1%. The comparable figure for Egypt's four public sector banks was 3.8% in 2002, or LE 9.2 billion.

Following is an estimate of new capital required if the banks were to increase capital to 7.1% of total assets:

June 30, 2002, LE millions

Scenario	Additional provisions	Assets	Est.cap. Req.	2002 capital	New capital
Current provisions	0	240,400	17,100	9200	7,900
Provisions + 100%	14,000	226,400	16,100	-4800	20,900
Provisions + 150%	21,200	219,200	15,600	-12,000	27,600

To raise equity to the Moody's average would require an injection of additional capital of LE 7.9 billion, even assuming that present provisions are adequate. Though unlikely to be feasible for the GOE, because of its budgetary constraints, this appears well within the capability of private sector buyers, based on the estimated retained value added from our analysis.

It might also be noted that in the base case that assumes a need to increase provisions by 100%, the new capital required is LE 21.9 billion (nearly \$4 billion). This is close to Fitch Ratings' 2003 assessment:³³

“[Fitch’s] estimates are that for the banking system to be in a position to support future economic growth, and deal with current asset quality issues (assuming conservatively that a quarter of loans are non-performing), at least \$5 billion is currently needed....This will largely be required in the four public-sector banks.”

In practice, it is likely that a significant portion of the needed increase in bank provisioning will take the form of removal of problem loans from the books of the banks before sale in order to (i) make the banks more attractive to buyers not willing to take on the workout of a large problem loan portfolio, and (ii) provide the GOE the opportunity to recoup some of the losses through asset sales. The analysis of the new capital requirements would remain much the same whether the provisioned loans are retained or sold to a GOE entity (“bad bank”) for nominal consideration. In either case, the capital of these banks will have to be restored.

Restructuring bad debt as GOE-guaranteed bonds is another possibility, although it is likely that most buyers, preferring to avoid such a concentration of exposure to the GOE, will either discount the valuation of the guaranteed loans or decline interest in acquisition altogether. In any case, a guarantee does not avoid fiscal implications for the GOE. The solution most conducive to privatization is to remove most of the problem loans from the books of the bank and lodge them in a special purpose firm (“bad bank”) established to recover as much as possible from the impaired portfolio. Auctions of the problem loans by the special purpose firm to specialized buyers have proved successful elsewhere, such as in South Korea.

4.3.3 Corrective Actions Under State Ownership

As a step toward addressing the foregoing problems that are, to one degree or another, characteristic of public sector banks wherever they exist, the CBE has initiated a program to reform the public sector banks. This program includes investments to upgrade information systems, such as risk information systems, and to link to new systems being introduced by the CBE,³⁴ staff training programs to upgrade the skills of bankers and other employees, overhaul of credit review processes, improvement of the current low quality of customer service, and new management and corporate governance systems. The latter includes “the privatization of management,” most important aspect being the hiring of well-experienced, highly skilled chief executives from private sector banks.

Nevertheless, these measures appear to fall far short of what is required to put the banks on a sound commercial footing:

- No matter how determined the current government is to commercialize the operations of the banks, a future government may well be tempted to revert to the old noncommercial practices. That is, the temptation of soft economic constraints remains and banks remain subject to the imposition of “policy lending” obligations or dictated deposit interest rates, which is under discussion as of this writing. *Ownership indeed matters.* For example, it appears that the new managements have not yet recognized the full extent of their problem loans. New management of privately-owned banks would typically want to identify and report the extent of

³³ “Egyptian Banking Sector: 2003 – Another Difficult Year Ahead,” Fitch Ratings Ltd., New York, September 2003, page 2.

³⁴ Central Bank of Egypt, “Egyptian Banking Sector Reform Policy,” July 2003.

the problem loan situation as a top priority, so as to establish a correct baseline by which to judge future management performance.

- Much of the new investment in information technology and training will not be recoverable in the course of eventually privatizing the banks if potential acquirers prefer to implement their own systems and train employees in accordance with their own procedures and practices.

The managerial measures undertaken, however worthy some may be, cannot solve the capital problem, which has not even been overtly recognized yet.

4.4 Total Value Added by Privatization

One use of the cost of not privatizing model is to estimate the amount of value added that will be retained by investors, *above threshold rates of return and* after the initial required recapitalization. That is, this is the portion of the value added that is not captured by the government as privatization proceeds. This “value added retained by buyer” represents the upper limit on the present value of the amount that buyers would invest in the banks *in addition to* the amount paid to the seller and in addition to the amount invested to bring the bank’s capital to the minimum level.

The following table shows the cost of not privatizing and the value added retained by the buyer in the three scenarios considered. The sum of these two amounts is the total economic value added by privatization.

<i>LE billions</i>	<u>Cost of Not Privatizing</u>	<u>Value Added Retained by Buyer</u>	<u>Total Value Added by Privatization</u>
Current provisions	11.4	4.9	16.3
Provisions + 100%	15.9	3.4	19.3
Provisions + 150%	18.9	0.8	19.7

4.5 Conclusions on Bank Privatization

Based on the assumptions of the cost of not privatizing model and sensitivity analyses, one can conclude:

1. The basic budgetary cost of not privatizing the four public sector banks – that is the cost of the *status quo* – is, conservatively, LE 16 billion in present value terms.
2. Total additional new capital required by the public sector banks, including needs for increased provisions, is on the order of LE 22 billion. Depending primarily on the level of under-provisioning and on potential buyers’ assessments of the achievable return on assets, all or most of this can likely be raised from investors through a well-orchestrated privatization program.
3. With annual profitability of the four banks totaling less than LE 1 billion, it is wishful thinking to believe that the banks can grow out of the problem of insufficient capital. It is unlikely that the vast majority of the new capital requirements can be met other than through privatization.
4. Current investment in pre-privatization operational restructuring will probably not be recovered when the banks are eventually sold. Strategic buyers – the most appropriate investors – will want to implement their own systems and procedures.

5. Ownership does matter, and the poor past performance of the public sector banks makes this clear. Introducing competent and experienced executives from the private sector will likely lead to significant improvement in operations. But to speak of “privatized management” is misleading. Changing management does nothing to change the legal framework; to impose commercial incentives and eliminate political pressures, to impose hard, market dictated economic constraints, and to increase capital.

4.6 State Ownership in the Insurance Industry

4.6.1 Government role in insurance in Egypt

There are 14 insurance companies in Egypt, four of which are state owned: three general insurers -- Misr Insurance, Al Chark Insurance, and National Insurance -- and Egyptian Re-Insurance. The three state-owned general insurers dominate the market, commanding approximately 60% of total industry premiums of LE 2.4 billion, which includes life and non-life insurance. With Egypt Re-insurance included, the state-owned companies collect nearly 80% of life and non-life premiums. The three control an even higher percentage of industry assets (see table), reflecting their 80% share of life insurance premiums.^{35, 36}

Year to June 30, 2002 ³⁷	Assets	%
3 state-owned general insurers	11,064	71.9%
Private insurers	2062	13.4%
Egyptian Re-Insurance	2262	14.7%
Total, all companies	15,388	100%
Assets, four state-owned insurers	13,326	86.6%

Source: Company Annual Reports and industry data

The sector includes a full range of insurance products. Life insurance represents 35% of total premiums, while the non-life sector includes, in order of importance, automobile, fire, accident, aviation, health and other categories.

The penetration of insurance products in the Egyptian market is quite low, with premiums representing only 1.1% of GDP. The average in other developing countries is 4 -5%, and worldwide the figure is about 8%.³⁸

³⁵ Oxford Business Group, “Premium Growth, Limited Reform,” *Emerging Egypt 2003*, London, pp. 81-85.

³⁶ Lotfi, Inge M., “The Insurance Sector, Background Paper,” USAID Cairo, 2001.

³⁷ Company annual reports and industry data

³⁸ Lotfi, *loc. cit.*

The under-development of the insurance market in Egypt is also reflected in the comparison of the assets of the insurers with that of the banks. The latter reported assets of LE460 billion in 2002, nearly ten times the level for the insurers. *So the importance of the sector in Egypt lies in its undeveloped potential.* Insurance companies are an important source of equity investment and longer-term bonds, two sectors of the financial market that need to be further developed in Egypt. Most of the Egyptian insurers' assets are invested in government bonds, equities, and real estate.³⁹

4.6.2 Performance of the state-owned insurance companies

Based on reported data, the state owned insurers are earning a similar return on assets as the private insurers. In the year ended June 30, 2002, the former earned 3.0% on average assets, while private companies earned 3.1%. Results were similar in the previous year, although the performance of the private companies has improved considerably from a 2.2% return in 1998/99, when the state-owned companies earned a margin of 3.4%. The significant improvement in the private insurers likely reflects the benefits of Law 156 of 1998, which removed the 49% ceiling on foreign investment in Egyptian insurance companies, allowing foreigners to set up wholly-owned firms in Egypt. At least a half dozen foreign insurers (for example, AIG, Allianz, Royal & Sun) have taken advantage the new law.⁴⁰ *Assessment of insurance companies, like banks, depends substantially on the valuation of assets and the suitability of provisions, and we have not attempted to assess either of these.*⁴¹

Company reports have been accepted at face value, which, combined with other assumptions appropriate only for groups of companies, means that this analysis is not intended to be used to judge individual firms. No data by firm is included in this report.

The state owned insurers show a significantly higher return on equity than the private insurers, with a 16.5% return compared to 11.5%. But this difference is largely explained by the private insurers being better capitalized, with net worth equal to 25% of assets, compared to 18% for the state owned insurers.

For comparison, USA insurers averaged 4.8% return on assets (before tax) and 20% annual return on net worth from 2000 to 2002. Their net worth to total assets averaged about 23%.⁴²

4.6.3 Costs of not privatizing the state owned insurance companies

The model estimates "costs of not privatizing" the four state owned insurers between LE 2.0 and LE 4.7 billion, with the sensitivity analysis based on the projected rate of growth of

³⁹ *Ibid.*

⁴⁰ Oxford Business Group, *op. cit.*, page 82.

⁴¹ Valuations of all four insurers have recently been performed by international investment banking firms, but we have not had access to the resulting reports.

⁴² "Industry Financial Analysis Profile, Insurance Carriers," BizMiner, Camp Hill, PA, USA.

assets. Other course the model is conducive to performing other sensitivity analyses as well. In addition to the assumption of 4.2% real asset growth rate, we performed sensitivity analyses at 6% and 8% per year growth. A long period of above average growth appears conceivable given that the small size of the sector today and the fact that unusually small share of insurance in Egypt's today. Only 2% of small and medium sized businesses carry insurance to cover such common risks as fire, theft and property damage. Premium income has been growing at 8 to 10% per year in nominal terms, or about 6% in real terms.⁴³

It is reasonable to assume some improvement in profitability as well. According to Oxford Business Group (2001), the state-owned insurers suffer from "bloated payrolls, inefficient and poorly trained staff, and out-of-date technology." In addition, private owners, particularly international strategic investors, can be expected to introduce new and innovative products and to engage in aggressive marketing. Consequently we have assumed a modest increase in return on assets to 3.8% (4.8% USA benchmark, after assumed 20% effective rate of taxation).

Using the case of 6% real growth in assets after privatization as a best estimate, we calculate the cost of not privatizing the four companies as follows:

Estimated privatization proceeds	LE 5.8 billion
Less, current value to GOE	-3.5 billion
Plus, tax opportunity cost to GOE	0.7 billion
Total Cost of Not Privatizing	LE 3.0 billion

This is the cost in present value terms to the GOE of not privatizing the state owned insurers.

The model is consistent in philosophy with that used to estimate the cost of not privatizing the Public Enterprises. The model includes various simplifying assumptions that are defensible only in evaluating business sectors, where resulting errors can reasonably be assumed to be offsetting. To assess individual insurance companies, it is necessary to undertake a detailed analysis of each bank, including projections based upon feasible strategies with and without privatization.

The calculation:

- + Present value of sector's future net income (surrogate measure of projected cash flow) excluding interest, assuming no privatization. Interest expense, as an expense fundamental to the business of an insurance company, is included in net income. (That is, the amount of debt is not treated explicitly as in the case of industrial companies.)
- = **Value to seller of the insurers to the Government of Egypt (GOE) as shareholder**
- + Present value of future estimated taxes without privatization
- = **Total value of the insurers to Government of Egypt**

To convert values to costs, as previously, we multiply the above values by minus one (-1). (That is, a positive value to the GOE represents a reduction in the costs of not privatizing.) Last, we add the following opportunity costs of not privatizing:

⁴³ Oxford Business Group (2003), page 81.

- + Estimated privatization proceeds. This is an estimate and is not intended as a minimum price or as a prediction of what privatization proceeds “should” be. Prices are determined by markets, not by someone’s a priori calculation.
- + Additional taxes that would be collected (tax opportunity cost) after privatization
- = **Cost of Not Privatizing to GOE (present value)**

Scenario	- Value to GOE	+ Pvtztn Proceeds	+ Tax Cost	= Cost of Not Privatizing
Asset Growth at 4.2%	3554	5042	496	1985
Asset Growth at 6.0%	3554	5783	743	2972
Asset Growth at 8.0%	3554	7065	1171	4682

Note: Cost of not privatizing = Privatization proceeds + Tax opportunity cost – Value of banks to GOE

4.6.4 Potential for New Capital Investment

One use of the cost of not privatizing model is to estimate the amount of value added after privatization, *above threshold rates of return*, that will be retained by investors (i.e. not included in the purchase price). These amounts represent the *upper limit* on the present value of the amount that buyers would invest in the banks *in addition to* the amount paid to the seller. These limits can then be compared with estimates of new capital required to estimate a feasible plan for sale of the insurance companies.

Scenario	Cost of Not Privatizing	Value Added by Retained Buyer	Total Value Added by Privatization
Asset Growth at 4.2%	1985	1737	3721
Asset Growth at 6.0%	2972	2601	5573
Asset Growth at 8.0%	4682	4097	8779

The upper limit on new investment is LE 2.6 billion in the best estimate 6% growth scenario. Of course the buyer will hope to invest less, if possible, to attain a higher level of projected profitability.

4.6.5 Conclusions on Insurance Companies

Based on the assumptions of the cost of not privatizing model and sensitivity analyses, one can conclude:

- The cost of not privatizing the four state-owned insurance companies – that is the cost of the *status quo* – is on the order of LE 3.0 billion in present value terms.
- In addition, up to LE 2.6 billion of new capital would be invested in the insurers.

- New foreign firms will provide increasing competition to the less efficient and less technologically capable state-owned firms, suggesting that the latter will lose value with the passage of time.
- As in most cases throughout the world, attempting to add value to state-owned firms prior to privatization through operational restructuring will likely prove to be wishful thinking and the investment will probably not be recovered. Much of any such restructuring would be redone by new strategic investors desiring to implement their own technology, products, and procedures.

4.7 Business Finance and Indirect Costs of Not Privatizing

What is the connection between privatization of major state-owned financial institutions and the supply of business finance? Egyptian SMEs consider the unavailability and high cost of business finance one of their major problems. Ironically, the restrained supply of finance to Egyptian business is not the result of illiquidity: Egyptian banks are in fact quite liquid.. The Public Sector Banks' problem is rather a lack of equity to support new loans and a limited supply of bankable lending opportunities.

However, it is too easy to blame this problem on the capacities of Egyptian businesses. In fact, well-developed, competitive financial markets have engineered attractive financial instruments specifically to enhance and marshal the creditworthy qualities of relatively risky issuers. But because of their dominance by state-owned institutions, Egyptian financial markets are uncompetitive and lack innovation. They have failed to advance widely such powerful instruments for channeling finance to SMEs as claims on pooled similar-asset vehicles, working capital revolvers, receivables sales, and the like. As noted by IMF (2002), the behavior of the four big state-owned banks "tends to distort the rest of the banking sector and retard its development." (p. 7) Competition creates innovation, and in finance, innovation is all about making "silk purses out of cows' ears".

Egyptian financial markets, dominated by state institutions, are poorly organized. Egyptian policymakers concentrate on the unrivaled ability of state-owned banks to attract deposits, and to direct funds to important projects and concessional business finance. But they fail to perceive the inefficiencies inherent in combining commercial and concessional financing activities – i.e., private and public motives – in a single institution. The state-owned banks are pressured on one side to earn commercial rates of return, and on the other to lend for social reasons. As a result, they can do neither well. Meanwhile, they stifle competition in Egyptian financial markets, preventing the development of instruments which would truly serve especially SMEs – as well as the attractive professional employment that goes along with financial markets development.

5. Egypt's State-Owned Utilities and Economic Authorities

5.1.1 GOE Ownership of Public Utilities

The Government of Egypt (GOE) has reserved some production activities as enclaves of public sector administered production, separate and distinct from commercial activities. These public production areas – the 61 Economic Authorities (EAs) – are treated as different from economic activities that could be produced and marketed by the private sector. Yet over the last several years, there has been a reassessment of these reserved areas of government production, induced by, among other expectations,

- the potential greater efficiency that might be available through private production and marketing

- the easier and more facile implementation of innovations through the competitive incentives of private production
- the greater access to finance for large capital projects required to provide these services.⁴⁴

In particular, this section of the report emphasizes the last advantage as the primary impetus for privatization of all or parts of the public service production implemented through economic authorities. That is, the primary cost of not privatizing is expected to be the shortfall in required investment for projected capital upgrading and expansion of infrastructure. The focus of this argument will be on Egypt's three primary public utilities – electric power, telecommunications, and water – the first two of which have in the past several years been unbundled and converted to joint stock companies to facilitate private sector participation. This section will make the case that the magnitude of required capital investment in these components of Egypt's infrastructure is massive, and well beyond the capacity of the GOE to finance it.

Every nation state reserves some activities to state monopolies, and there are two overlapping economic arguments for doing so – natural monopoly and decreasing cost industries. Yet other welfare arguments, with important political implications, are:

- subsidizing users of the service
- maintaining domestic production and excluding foreign interest
- providing employment for government workers
- strategic or defense considerations (e.g., control of air space, port administration or production of petroleum)
- unique connection with national identity (eg, Suez Canal, Panama Canal, national monuments and historical sites, museums, universities).

Still, whether these activities need to be *produced by the state* as opposed to be *regulated by the state* is a key question.⁴⁵ While even the governments of the most market-oriented economies typically reserve some activities such as national defense, public health, law enforcement, judicial processes, and incarceration of criminals as government-provided services, there almost always is potential for private production with government regulation. Other widely-consumed essential services are sometimes produced by the public sector or regulated by the public sector such as public utilities (power, water, communication), waste disposal, railway or other public transportation. In all cases, public policy assessments in both the developed and developing economies have increasingly addressed the question of whether commercialization, private concessions, or simply pricing regulation can satisfy the political aspects that support the public interest in these public services and infrastructure.

5.1.2 Utilities and Natural Monopoly

⁴⁴ See Saghir (2001)

⁴⁵ For example, prisons are being run by private sector firms in the United States, and public health activities are frequently undertaken by private firms (eg, immunizations or screening for diseases). Also, roads and even aspects of public security and fire protection have been undertaken by private firms, either at the initiative of private individuals wanting a higher degree of service of the government, contracting out the basic service level. Private mail and delivery services are now commonplace alongside government provided services. Electric power, natural gas, water and waste disposal services (liquid and solid) are distributed in many economies by private companies, although generally under publicly regulated prices. At the municipal level, the so-called Lakewood Plan originated in Southern California with the government of a small city contracting for police and fire protection services from the county of Los Angeles.

Traditionally, utilities and transportation networks have been characterized as *natural monopolies*. By this phrase, analysts have intended to suggest that the service provided by a utility could be best produced by a single firm because there exist economies of scale (or scope) in production or that the gains from competing systems would be less than the environmental losses.⁴⁶ This creates two arguments for the public regulation of the activity:

- i) First, if there are economies of scale, then the larger is production, the lower will be average cost. Hence, it would be socially efficient to have one firm rather than two (or more) delivering the service because the sole provider could produce it (because of its larger scale) at lower cost.⁴⁷
- ii) Second, given the declining average cost of production implied by economies of scale, marginal cost would lie below the average cost of production. That is, an additional consumer could always be accommodated at a lower incremental cost (marginal cost) than the average cost of servicing the existing consumers. Consequently, a producer with declining costs could not cover his total costs – in particular, its cost of capital – by setting his price at the margin (equal to marginal cost), which is the behavior of a producer in a competitive (increasing cost) industry. The solution to this problem is to have either
 - a multipart pricing schedule (different prices for different users or different prices for different scales of usage)
 - a lump sum subsidy combined with a single-price (marginal cost) schedule
 - a combination of the two – e.g., single price with quantity discounts and a lump sum subsidy.

Standard utility regulatory practice bases pricing on marginal cost of delivery for various classes of customers (inclusive of quantity discounts for large users) combined with a subsidy. The regulator sets the tariff (and subsidy as relevant) so that total earnings (revenues minus costs) generate a normal rate of return on capital.⁴⁸

Both of these arguments uphold the relevance of government *intervention*, but neither requires government *production*. The required government roles are

- to license providers (limiting entry to ensure that economies of scale are obtained), and
- to regulate pricing (to ensure that the provider's price and tariff schedule cover its variable costs and cost of capital, while protecting consumer welfare).

Note that if competition can somehow be restored, not only is the first role made inappropriate, but the second is rendered unnecessary. Both of the roles have indeed been frequently unwound by subsequent technological advances that enable the capturing of both advantages without the restrictions on entry. For example, in telecommunications, the

⁴⁶ The latter is easiest to conjure up by considering how multiple roads between common destinations would put more land under pavement than would be pleasing to the electorate.

⁴⁷ Even if more than one firm started to produce the service, the firm that at any time gained a larger scale would face lower costs of production and could, therefore, underprice its competitor and drive it out of business. Thus, the same characteristic that enables a natural monopoly would tend to result in a single firm producing all of the output.

⁴⁸ This appears to have been established in the Presidential Decree No. 339/2000, reorganizing the Egyptian Electricity Utility Organization and Consumer Protection Agency by Article 2, establishing price setting authority, and Article 3.5, ensuring that prices are sufficient so "that a fair yield is realized for the Electric Utility to guarantee the continuance of its activity and its sound financial situation."

advent of mobile telephone systems has circumvented the argument of a single carrier's economies of scale.⁴⁹ More generally, common carrier administration (and technical innovations) have made it feasible for more than one provider to use a single distribution system. These advances have made it possible to introduce competitive provision of services into what had previously been areas not naturally susceptible to it.

5.1.3 Financial Performance of Egypt's Economic Authorities

The GOE oversees 61 Economic Authorities (EAs), whose activities range from the Suez Canal and the exploitation of Egypt's petroleum to public utilities, investment banks, a printing house, transportation services (airlines, railway, ports and road transport), public and private health services, and hotels. In Table 30 of the Statistical Appendix, compiled for this report from Ministry of Finance budget data for the fiscal year 2003/2004, we list in declining order, by total revenues, the financial performance of 60 of the 61 extant economic authorities. The following table presents the summary data from the Appendix table:

Authority Category	Subsidies	Wages	Surplus / Deficit*	General Treasury**	Capital Investment***
Authorities with Operating Surpluses	0.3	1.2	10.8	0.0	1.3
Authorities with Retained Operating Surplus	0.2	1.3	0.4	0.0	0.8
Authorities with Operating Break-Even	12.5	0.4	0.0	0.0	0.4
Authorities with Operating Deficits	0.3	1.6	-2.9	2.3	2.6
TOTAL	13.3	4.4	8.2	2.3	5.1

* Surplus or deficit is after subsidies, which are included in revenues.

** Partially finances debt repayment and operating deficit.

*** Represents new credit facilities to finance capital expenditures.

Approximately 85% of debt is owed to the National Investment Bank.

The tables list the EAs in four groups, those with

- operating surpluses
- retained operating surpluses
- break-even operating surpluses, and
- operating deficits.

In each case, the operating result is inclusive of subsidies (listed in column 1 of the table). The first two categories, both of which have operating surpluses (inclusive of subsidies) are distinguished by whether, as in the second category, the EA has some control over the

⁴⁹ While each provider may have economies of scale, each provider is seen as different in its service package so that pricing can differ between them, an industrial structure known as monopolistic competition. Hence, price is not driven to marginal cost, and each provider can generate a pricing schedule that covers its costs. The state may still choose to regulate pricing, typically by reserving the right to approve or disapprove a proposed tariff schedule.

disposition of the surplus or whether, as in the first category, the EA monthly passes one-twelfth of the expected annual total surplus (in the budget) on to the Ministry of Finance. The disposition of the retained surpluses (second category) is determined by Parliament at the end of the budget year as, between retained surplus for reinvestment or reserves and pass-through to government; the disposition of the surpluses of the first category of EAs are reconciled with actual surpluses at the end of the fiscal year.

Of those authorities with anticipated operating surpluses for the 2003/2004 fiscal year, the two largest authorities – the Suez Canal Authority and the Egyptian General Petroleum Authority – would contribute 87% of total budgeted revenues for all the EAs – LE 64.5 billion combined, of LE 74.4. Considering budgeted operating surpluses, these two behemoths will account for more than LE 9.2 billion, or 89% of the LE 10.3 billion operating surplus. Even if subsidies are deducted (second column), this group with net operating surplus retains positive net revenues. However, for the rest of the EAs, the story is less positive.

Overall, most of the other authorities will lose money – i.e., require anticipated and budgeted GOE subsidies – but the net revenues of the two dominant economic authorities' carry the losers. The EAs with *budgeted* negative operating surpluses are expected to lose an aggregate LE 2.9 billion in the coming fiscal year. Thus, the net total for the economic authorities is budgeted to be a positive LE 7.4 billion; however if subsidies are deducted, the net total is large and negative: - LE 5.9 billion. Another way of viewing this sum is that, in aggregate, the other 58 economic authorities will have cost the GOE LE 1.8 billion (LE 9.2 billion less LE 7.4 billion) during the current fiscal year before adding subsidies to the cost. Inclusive of subsidies, the cost to the GOE of the 58 non-petroleum, non-Canal EAs is budgeted to be LE 15.1 billion during fiscal 2003/04.⁵⁰

Setting aside the Suez Canal and the Egyptian General Petroleum Authority, the sum of total *annual* losses and annual subsidies of the other 58 EAs (as specified in the 2003/04 budget) are LE 15.1 billion. If this were projected to continue indefinitely, it would imply a present value cost of not privatizing these EAs of LE 83.9 billion, using the 18 percent nominal discount factor we applied to the Law 203 companies in Section 3.3 above.

As the detailed Table 29 in the Appendix indicates, the range of activities encompassed by the economic authorities makes generalizations difficult, but it is clear that each of them entails aspects of administrative design combined with production, non-financial services or extension of financial services. Each of these activities could be privately produced under government regulation, but it is useful for focus to consider a subset of the economic authorities which are currently candidates for privatization, namely, the public utilities: electric power, telecommunications, and water. An additional rationale for this concentration will be developed in the discussions of the specific utilities and their needs, namely the need for capital to expand and renovate service capacity that is beyond the capability of the GOE to finance.⁵¹

Besides privatization, which may be politically infeasible for some economic authorities – in Egypt, the most notable examples would be the Suez Canal, the General Petroleum

⁵⁰ The Minister of Finance, Dr. Medhat Hassanein, recently announced a plan for the improvement of performance levels in economic authorities. The minister indicated that a plan would be implemented in next fiscal year, tying wages and incentives to realized production and operating profit, in order to alleviate the burden on the budget whose subsidies annually exceed LE 6 billion. *Al Akhbar*, 1 November 2003.

⁵¹ Two of these, electric power and telecommunications, have been reorganized as joint stock companies with, currently, the GOE holding 100 percent ownership of the shares. In place of their former status as economic authorities, they remain subordinate to ministries and subject to regulatory agencies established at the time of their joint stock company incarnation.

Authority and the various water authorities⁵² – there are several other options that can be used to improve the efficiency (stem the losses) of the authorities:⁵³

- Management contracts to provide incentives for efficient production and investment⁵⁴
- Performance contracts with public managers; rewards and management freedom to make changes
- Removing access to subsidized finance or tax remission in order to harden budget constraints

In general, however, the empirical literature has found that these measures are not as efficient as privatization in generating efficiency in public utility provision.

Given the variety of the economic authorities and the many political-welfare reasons given for not privatizing them, the focus of the discussion in this section will be on the utilities – electric power, telecommunications, and water (supply and waste disposal).⁵⁵ Each of these has been subject to a variety of alterations – unbundling or regulatory relaxation – in recent years to improve its management structure. Unbundling has also facilitated for the privatization of some components of the vertical chain of production – e.g., power generation in electricity. This “privatization by parts” is sometimes referred to as private sector participation (PSP).

5.1.4 “Cost of Not Privatizing” the Economic Authorities

Because of data limitations, our approach to the Economic Authorities differed from the method applied to Law 203 companies, banks, and insurance companies. The analysis of the Authorities does not attempt to estimate opportunity costs of not privatizing, that is, privatization proceeds and tax revenue opportunity costs. Rather, the analysis is limited to estimating the net budgetary “cost of pursuing present policies”.

Capital costs, inflation, and future real economic growth assumptions were the same as for the other microeconomic analyses. Cash outflows were assumed in the future to equal the same percentage of revenues budgeted for 2003-04. Future revenue growth was assumed to be the same as the annual projected real growth in the economy, 4.2%, except that revenues for the water authorities were projected to grow at 6.2% annually based on the need for accelerated growth in this area to meet supply objectives.

The analysis did not include the Suez Canal or the Petroleum Authority, which are the best performing Authorities and which appear not to be likely candidates for privatization in the foreseeable future. Also excluded were the Social Insurance Authority and the Food Supply Authority, which are the worst performing Authorities and, again, presumably not candidates for privatization because they perform social safety net functions that are commonly considered within the reasonable purview of government.

⁵² President Mubarak recently likened Egypt's water as its national blood and promised that it would not be privatized.

⁵³ See Galal and Shirley (1995), pp. 250-257.

⁵⁴ Both of the profitable EAs are administered on commercial bases. A management contract approach to managing the Suez Canal has been in place since it was nationalized in 1956. The petroleum authority is run as a regulator, auctioning leases to private oil companies to explore and develop sites. Successful projects are then operated as joint ventures between the oil company and an Egyptian PE.

⁵⁵ Note that the electric utility, established as an economic authority by Law No. 12 of 1976, was changed into a joint stock company wholly owned by the GOE by Law No. 164 of 2000.

On these assumptions, the budgetary cost of pursuing present policies is LE 59.5 billion in present value terms.

5.1.5 Electric Power

5.1.5.1 *Legal Evolution and Current Structure*

Over the past two decades, there have been progressive modifications to the Egyptian Electricity Authority (EEA) to facilitate private provision of various components of its service. Graphically, electric power provision can be thought of as having three primary components – power generating plants, the transmission grid, and distribution companies. As established in Law 12 of 1976, the EEA was given sole competence in the production, distribution and sale, research and supporting technical work, and project execution of electric power. However, primarily with modifications to the 1976 law starting in 1996, the authority has been progressively modified to:

- allow private production through concessions not to exceed 99 years (Law 100/1996);
- allow private investment (minority interest, not to exceed 49 percent) in seven distribution companies (Law 18/1998);
- transform the EEA into the Egyptian Electricity Holding Company, a joint stock company wholly owned by the GOE (Law 164/2000);
- establish, by Presidential Decree, a price regulatory agency (Decree No. 339/2000).

The joint stock company's board is supposed to now run the company on a commercial basis, reporting to the Ministry of Electricity and Power.

As a result of the reorganization of the EEA into a holding company, private sector ownership and crucially, private sector investment, has been made lawful if not yet completely actuated. The GOE retains complete and undivided control over the national grid (transmission), but allows for private ownership of generation and minority ownership of distribution. Privatization of the generation side of the electric utility has been effected, in part, by three Build-Own-Operate-Transfer (BOOT) projects – one owned jointly by Intergen, a Bechtel-Shell-Edison (Italy) joint venture, and the other two by Electricite de France (EDF). These facilities have added some 1300 megawatts to Egypt's electricity generating capacity, about a ten percent increase.

Privatization of the distribution companies has been hampered both by the minority ownership restriction and by ambiguities about how to price it. In particular, the problem was pricing of the shares arising from the difficulty of changing the electricity tariff due to social (subsidy) and political considerations. While the Presidential Decree No. 339 of 2000 should have ameliorated this concern, it has apparently not yet engendered market confidence sufficient to float the minority interest allowed in the distribution segment of the industry.

5.1.5.2 *Electric Power Capital Needs*

Currently, industry consumes about 7 gigawatts (GW) or nearly half of the current generating capacity around 14.6 GW. With domestic demand growing at 4.5-6 percent annually, there will be a demand over the next few years for an additional 5 to 7 GW just to maintain the current demand relation to supply. With expanded industrial use and rural electrification, GOE has plans to add another 9.3 GW of capacity during 2003-2010. This additional capacity could be created through 15 BOOT power projects to be built before 2010.⁵⁶ Scaling by the three recently implemented BOOT projects – each of these were in the range

⁵⁶ Oxford Business Group (2003), p.100.

of US\$ 500 million – about US\$ 7.5-8 billion in capital will be needed to build the additional 9.3 GW of capacity. However, the future of BOOT contracts to implement these projects is presently problematic, given the uncertainty about the future value of the Egyptian pound: GOE is reluctant to take on projects financed in hard currency. As Oxford Business Group (2003) observed, “A lack of foreign hard currency, a weak Egyptian pound and uncertainties over return on investment will also preempt interest in such projects for some time.” (p. 101)

Consequently, there is a need for financial and direct investment arrangements that will provide for financing as US\$10-15 billion, a need that would severely stretch the resources of the GOE.

5.1.6 Telecommunications

5.1.6.1 *Legal Evolution and Current Structure*

Like the electric utility, the Egyptian telecommunication utility technically is no longer an economic authority. It became a joint stock company in 1998, and the successor entity, Telecom Egypt (TE), is wholly owned by the GOE. TE is operated by a private sector management team, and the Ministry of Communications and Information Technology (MCIT), created in October 1999, is responsible for managing the sector independent of TE’s management.⁵⁷ An independent agency tasked with rate setting and regulatory decisions, the Telecoms Regulatory Authority (TRA), was created in the Telecommunications Act of 2002. This legislation, passed in December 2002, provides for the deregulation of national and local communications in 2005, ending TE’s monopoly *de jure*; however, *de facto*, the end of TE’s monopoly commenced five years ago.

In 1998, a mobile telephone concession was given to TE, and then later spun off to a consortium (MobilNil) of local investors and a unit of France Telecom (71 percent). A second mobile phone license was let a year later to Vodafone, and a third mobile license became available to TE in 2003.⁵⁸ Market penetration has been spectacular in these mobile phone systems’ first four years – sevenfold growth from 1999 to mid-2003 so that one Egyptian in fifteen now has one. With competition between the two mobile phone systems leading to a near dead-heat in market share – Vodafone now has 47 percent of the market, up from 37 percent a year ago – there was a steep reduction in mobile phone tariff rates over the first three years of their coming to market.

Moreover, there has also been a significant impact on the state landline monopoly. Improvements in service by TE since the mobile phone companies entered the market have included a reduction in rates, an improvement in line quality and a lessening of the waiting time to get a landline. In particular, there has been a 12 percent increase in landlines in the

⁵⁷ Nevertheless, opening of the market has hardly been complete. Attempts have been made to pay TE not to operate the third mobile license, and they have not yet done so. Also, TE’s market power reduced competition among ISP’s – effectively eliminating some operators from the market – when it provided a small, select group of ISP’s very low dial-up access rates. “Private sector observers say that despite the official separation of TE from the Ministry of Communications and Information Technology (MCIT) and the Telecoms Regulatory Authority (TRA), decision are still taken by a few top officials concerting across the three bodies.” Oxford Business Group, “Waiting for Better Times,” p.118, in *Emerging Egypt 2003*.

⁵⁸ Interestingly, as an indication of the good faith of the MCIT to be evenhanded in its dealings with the private sector telecoms and the TE, the state monopoly was compelled to pay LE1.9 billion for the license (Ibid). Still, whether TE financed this license purchase without state assistance has not been made clear.

last three years, and the wait for a landline has dropped sharply – from two years in 2000, it is “expected to disappear entirely by the second half of 2003.”⁶⁹

To emphasize, competition through technological innovations, by introducing substitutes for the state-owned monopoly’s service, has compelled it to compete for its clientele – consistent with other results in the empirical literature cited in Section 2 above. The introduction of mobile phones has forced the monopoly to compete on price, quality of service and access (i.e., quantity) of output. Even low-income Egyptians unable to afford mobile phones are benefiting, as yet another source of competitive pressure has entered the market in the form of a liberalized pay-phone industry.⁶⁹ There are now three operators, two foreign-owned and one domestic firm, providing pay phones so that all Egyptians will have access to telecommunications and lifeline services.

5.1.6.2 Telecommunications Capital Needs

There was an effort to take 59 percent of TE to market 2001:

- IPO of 10 percent on the Cairo-Alexandria Stock Exchange
- 5 percent share to be sold internationally
- 10 percent transfer of shares to TE employees
- 34 percent share with management rights to a strategic investor.

Merrill-Lynch was retained to oversee the search for a strategic investor with these terms, but came up empty. While TE is described by Oxford Business Group (2003) as “a profitable company that earns both local and foreign currencies [so that TE] may be hard to let go of” (p. 118), this depiction is incomplete on several counts. First of all, it does not consider the alternative of tax and license fees that GOE could obtain from a privatized TE; second, it does not consider that TE is going to be *de jure* just another competitor in 2005 by the Telecoms Act of 2002; third, it ignores the massive capital infusion that will be required for TE just to maintain market share. So far, there has been a US\$3 billion (LE 18.6 billion) upgrade in TE’s system started in 2000, and, as noted above, TE paid LE 1.9 billion for the third mobile phone license early in 2003. These are outlays that should be raised and overseen by the private sector. Kept in the public sector, it is not at all clear what is meant by “profitable.” Moreover, it will be more advantageous for GOE to privatize TE before the market opens in 2005, so that the buyer will obtain a head start on whatever other entrants may decide to participate in an open Egyptian telecommunications market.

5.1.7 Water and Waste Water

5.1.7.1 Legal Evolution and Current Structure

⁶⁹ Oxford Business Group, “Waiting for Better Times,” p.117, in *Emerging Egypt 2003*.

This is similar to the experience in Nigeria where in the two years since the introduction of mobile phones by two competing South African companies, the number of mobile phone subscriptions has effectively doubled the number of phone lines available and put pressure on the landline state-owned monopoly, Nitel, to enhance service, cut waiting time for access to new service and improve its bill collecting. According to a close observer of the Egyptian telecoms industry, Nigeria’s evolution is similar to the experience of Lebanon and Jordan which now have about equal numbers of landlines and mobile phones.

⁶⁹ One more emerging technological diversion of demand from TE’s erstwhile monopoly is voice-over internet (VOI) communication. While parliamentarians may decry this as “illegal telecom outfits stealing from the state,” (Oxford Business Group 2003, p.119), there is no question that consumers are benefited by the innovation reducing the market control of TE.

Eleven of the 60 economic authorities in Table 29 in the Statistical Appendix are potable water or waste water (sewage) authorities, and only one, the General Authority for Alexandria Water Utility, is profitable – budgeted for an operating profit of LE 10 million on revenues of LE 243 million in fiscal year 2003/04. The other ten water and waste water authorities appear in the fourth category of the table, those losing money, with the total budgeted loss for the fiscal year projected at LE 923 million, or about half of the explicit LE 1.8 billion in losses (before adding subsidies) of all 60 EAs for which we report budgeted data. For convenient reference, the eleven water and waste water EAs in Appendix 1 are reported separately here:

#	Authority Name	Wages	Subsidies	Surplus Deficit	Treasury	Total Debt
8	General Authority for Alexandria Water Utility	63.0	0.0	10.2	12.8	400.2
46	General Authority for Greater Cairo Water Utility	154.0	0.0	-377.9	115.3	2813.7
48	General Authority for Greater Cairo Sewage	124.0	0.0	-315.0	116.0	1158.1
50	General Authority for El Gharbeyya Sewage & Potable Water Utility	53.5	0.0	-12.9	8.2	3.1
51	General Authority for El Dakahleyya Sewage & Potable Water Utility	54.0	0.0	-7.5	4.5	5.6
52	General Authority for Alexandria Sewage	49.5	0.0	-155.0	64.8	542.4
53	General Authority for El Sharkeyya Sewage & Potable Water Utility	38.8	0.0	-5.6	3.1	4.1
55	General Authority for El Fayoum Sewage & Potable Water Utility	19.0	0.0	-18.0	6.6	1.2
56	General Authority for Menia Sewage & Potable Water Utility	22.7	0.0	-8.0	6.6	3.2
57	General Authority for Beni Suef Sewage & Potable Water Utility	18.5	0.0	-5.0	0.8	0.9
59	General Authority for Aswan Sewage & Potable Water Utility	24.0	0.0	-8.0	7.9	0.8
	TOTAL	558.0	0.0	-912.9	333.8	4938.3

More than 90% of the water authorities' debt is owed to the National Investment Bank. While interest is accruing, most interest and principal is unpaid.

As table indicates, the Alexandria Water Utility and Greater Cairo Water EAs are by far the biggest of the eleven, and Alexandria is the only EA expected to generate an operating surplus as it has in the past. Also, the Alexandria waste water EA (General Authority for Alexandria Sewage) has in the past four budget years been found to cover half to four-fifths of its operating costs, but the current budget shows a much lower coverage – a loss of LE 155 million on anticipated revenues of LE 50 million.⁶²

⁶¹ Source: *Official Gazette*, June 19, 2003, Annexes B, C, D.

⁶² Per David Osgood, Chief of Party of USAID's WWSPP Project, the Alexandria tariff structure covered 50-, 60-, 80-, and 60-percent of its operating costs for waste water during , respectively, 1999-2002, while potable water tariffs generated an operating surplus in each of these years.

The eleven water and waste water EAs probably cover more than 90 percent of Egypt's water-consuming population, so that capital needs can be largely approximated by their projections.

Of the three utilities, water and waste water is by far the least currently structured for private sector activity through PSPs. In contrast to electric power and telecommunications, both of which have been converted from EAs to regulated joint stock companies (wholly state-owned), water and waste water remains not only a state monopoly but a fragmented one with byzantine complexity. As seen in Table 20, eleven of the water and waste water utilities are EAs; in addition, three others are wholly owned state companies under Law 159⁶³, and there are twelve water utilities that are departments of governates. Oversight for water and waste water generally falls under the advisory purview of the Ministry of Housing, Utilities and Urban Communities.⁶⁴ For each of these 26 utilities, waste water treatment issues are overseen by the governor who also has the authority to set the tariffs for potable water and waste water surcharges with the advice of – but unconstrained by – local government recommendations. As is common in many countries, tariffs are set for potable water, and waste water disposal is billed as a surcharge based on the potable water consumption.

President Mubarak has been quite explicit that Egypt's water utilities will not be sold, and there has recently been a failure to organize a Build-Operate-Transfer (BOT) 33-year water supply management concession for the Suez Industrial Zone, so the opportunities for PSP seem quite limited.⁶⁵ Nevertheless, opportunities exist even if the governance structure maintains public control of this key and sensitive service. For example:

“The Ministry of Housing and the South Sinai governate agreed to outsource the operations and maintenance for the entire water system for South Sinai – plants, pumping stations, and networks in the nine cities of Ras Sidr, Abu Redeis, St. Catherine, Abu Zinaima, Tur Sinai, Sharm El Sheikkh, Danhab, Nuweiba, and Taba. The contractor supplies labor, equipment, and tools for all parts of the system that are not under an existing service contract. . . . As services improve, this arrangement will stand out as a good example of how public services can be outsourced, increasing confidence in the viability of private sector participation to provide effective utility services on an affordable basis.’⁶⁶

A beginning of rationalization of Egypt's water utilities is in process in the form of two draft presidential decrees that were sent to the cabinet at the beginning of November 2003 to:

- Establish a tariff structure to be applied uniformly across Egypt;
- Establish Law 203 joint stock holding companies to administer water and waste water.

⁶³ Behaira, Lemiet, and Cachet are the locales where these Law 159 companies are located.

⁶⁴ New communities each have utility departments within the Ministry of Housing, Utilities and Urban Communities.

⁶⁵ “In 1999, a 33-year Build-Operate-Transfer (BOT) and water supply management concession for the Suez Industrial Zone was awarded to SNC Lavalin. The project was valued at US\$155 million, and was to be Egypt's first true BOT in the water and waste water sector. The deal, however, fell apart in early 2002 when it became clear the GOE was unwilling to make concession payments in dollars. Two other projects were also side-lined at the feasibility stage due to similar uncertainties about hard currency commitments in BOT contracts.” *DCA Concept Paper*, WWSPR Project.

⁶⁶ *Ibid.*

If these decrees are put into operation, water and waste water utilities will attain the same rational structure, both in organization and in tariff regulation, earlier been implemented for electricity and telecommunications. In this case, the enhanced order and transparency will make more attractive to both potential principals – investors and private sector participations such as the South Sinai project.

5.1.7.2 Water and Waste Water Capital Needs

There is a variety of estimates of the capital needs to attain various levels of adequacy in potable water and waste water treatment in Egypt.⁶⁷ The most general aggregate estimate for all of Egypt, from USAID, is LE 4.5 billion annually or about LE 60-75 billion through 2018 to meet the needs for both potable water and waste water treatment. In addition, to provide the implicit subsidies embodied in the operating deficits and service the accumulated operating debt, an additional LE 1.5 billion per year could be needed, or an undiscounted total of LE 15 to 20 billion over the next 15 years. To this should be added the past cumulative operating deficit of the water companies held by the Ministry of Finance (LE 6.3 billion) and LE 4.6 billion in water company debt held by National Investment Bank. Thus, to finance what has been accumulated and what needs to be built would require as much as LE 95 billion over the next 15 years. An alternative from the WWSPR Project concurs on the accumulated deficits, but puts the total required investment in water and waste water Egypt-wide at LE 100 billion. WWSPR puts the required investment over the next five years at LE 40 billion and argues that a conservative estimate of what is required over the next two decades would be LE 55 billion. Table 20 suggests that, given the 2003/04 budget deficit of the 11 EAs at LE 912 million, that two decades could easily cumulate LE 20 billion in operating deficits in addition to capital needs. Thus, between LE 55 and 95 billion – and perhaps LE 62 to 107 billion if carried through 2020 – will be needed. How are such amounts to be financed?

5.1.8 Utilities' Total Capital Needs

The sum of the capital needs for the three utility sectors over the next two decades is on the order of LE 300 billion:

- Electricity: needs estimated at US\$ 8 billion through 2010 (LE 50 billion), so LE 100 billion through 2020;
- Telecoms: taking the already dedicated US\$ 3 billion upgrade for 2000-2003 as continuing, so US\$ 18 billion through 2020, or LE 112 billion;
- Water: LE 55 to 95 billion (including accumulated debt).

The total is between LE 250 and 300 billion. To scale this, consider that the 2003/04 budget deficit is about LE 40 billion, so that incremental capital expenditures of LE 300 billion over the next 17 years would imply an addition LE 16.6 billion per year or a 40 percent increase in the current deficit. In present value terms, this 17 year annuity of capital outlays and debt service (using the 18% discount factor employed in evaluating the Law 203 companies) would be LE 86.7 billion. Thus, privatizing or letting commercial concessions for these required capital outlays would relieve the GOE of trying to raise the annual amounts, or their equivalent present value, either of which is beyond the financial capacity of the government. The cost of not privatizing can be measured by this capital funding shortfall.

Since raising these funds is not feasible for the GOE, the obvious alternative will be to forego building this required infrastructure. For each of the utilities, PSP projects are feasible without seriously affronting government welfare protection policies. Even water projects can

⁶⁷ These do not include the cumulative operating losses for the 14 water utilities which are estimated to total LE 6.4 billion.

be undertaken with private sector participation, as the South Sinai project demonstrates. Alternatively, the shortfall in the utility sector will not only reduce the potential well-being of Egypt's citizenry, but it will hold back industrial and service sector development. Beyond the LE 86,7 billion budgetary cost of not privatizing, there are likely to be significant social benefits – better access to potable water, a more sanitary environment, and wider electrification. These benefits directly address World Bank Millennium Development Goals of 2015. They also are required to attract foreign direct investment to meet economic development growth goals.

The extremely heavy capital needs of major utilities have never been anywhere adequately met without substantial private capital. Even in the richer countries, governments simply do not have revenue resources, current and (for debt-servicing purposes) future, large enough to properly fund the continuing heavy investment requirements of major infrastructure. And there is no reason why they should have to allocate their scarce resources toward monopolizing utility provision, when specialized private business is willing to do so and is much more capable of mobilizing the necessary financial capital.

Indeed, Egypt's own economic history demonstrates this. Vitalis (1995) authored the most authoritative study of the origin and growth the major Egyptian private business groups. As he shows, private finance and private participation in Egyptian public utilities was a major driver of growth in the first half of the 20th century. All of the original major electrification and streetcar systems in Alexandria and Cairo were privately built and operated. The Aswan Dam electrification project, identified with the Nasser era, in fact had gone through 30 years of planning before it got to him. It was originally proposed in the early 1920s, and all of its many subsequent versions involved dominant private sector participation. Private participation in public utilities, while conventionally identified with foreign multinationals (Empain, GE, Westinghouse, EEC, ICI, Siemens), in fact always included and indeed was led by major Egyptian industrial groups (Talat Harb and the Misr group, the Yahya family, the Salvagos group, Ahmad Abbud).

In fact, major utilities equipment and engineering was one of the first truly globalized heavy industries, precisely because the intensive capital requirements made firm size, and therefore financing ability, important. It is even more true today that global private enterprises can shoulder the financial and management burden of public utilities. With substantial improvements in knowledge of best practices in regulatory policies and procedures, there is little reason why governments should not invite them to do so through privatization of their major utilities.

5.1.9 Synergies for Capital Markets and Pension Reform

Finally, there is a potential synergy between privatization of the utilities and long-term capital markets development, especially in pension reform and long-term saving programs such as life insurance. Both of these require secure, long-term investments, and utility investment securities are generally an important portion of these portfolios of non-bank financial companies providing these products. One method that has been advocated to increase the national savings rate is mandating a minim contribution for individuals to a (private) savings account generally accessible only at retirement – adding a “second pillar” to the pension system. By inducing financial markets development, privatization of public utilities and their financing would also help induce wider economic growth.⁶⁸

⁶⁸ See Levine (1997).

5.1.10 Summary Budgetary Costs of Not Privatizing

We can now bring together the results of the prior sections 3, 4, and 5. The following table provides a summary of the budgetary costs of not privatizing publicly-owned companies in the three broad sectors we have reviewed.

	Law Companies	203 Banks Ins. Cos.	& Economic Authorities	TOTAL		
				LE	% Budg Deficit	% of GDP
Operating Burden	12.1	1.3	59.5	72.9	33.9%	3.1%
Privatization Proceeds	21.0	11.0	a	22.8	10.6%	1.0%
<i>Less concessions</i>	-9.2	0.0				
Tax Revenues	3.8	6.6	a	10.4	4.8%	0.4%
Total Budgetary Cost	27.7	18.9	59.5	106.1	49.3%	4.5%

a: Not estimated. Budget deficit and GDP ratios are for the 2004-2008 period as a whole.

The total budgetary cost of not privatizing, in present value terms, is over LE 100 billion – 4.5% of GDP over the 2004-2008 period. If these costs could be recovered over the next five years through an aggressive privatization program, they would cut the projected budget deficit for the 2004-2008 period in half.

6. Macroeconomic Performance Costs of Not Privatizing in Egypt

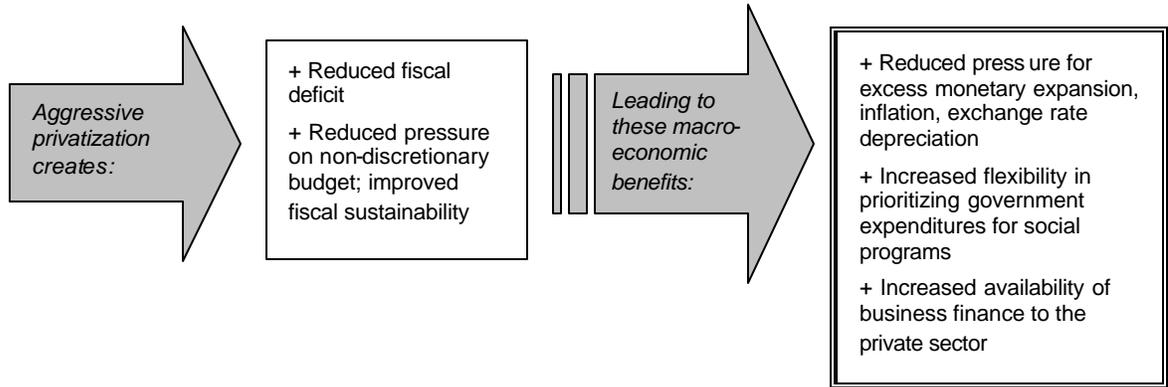
As noted in Section 2.3 above, the empirical literature addressing the effect of privatization on macroeconomic growth is much more limited than is the microeconomic literature, mainly because it is so much harder empirically to isolate privatization's broader impact, especially within the context of an overall program of policy reform. Nevertheless, as reviewed there, the literature does suggest that the net macroeconomic effect of privatization is positive. And indeed, this should only be expected, since the macroeconomy is simply the aggregate of its microeconomic agents. If it is empirically unambiguous that individual firms perform better when privatized, then it must be true that their aggregate performance is also better.

6.1 "Connecting the Dots": Microeconomic Cost of Not Privatizing and Macroeconomic Performance

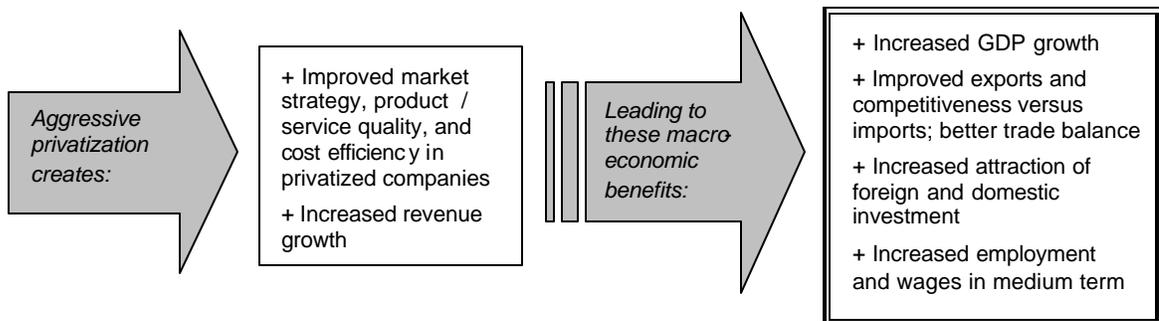
As we concluded in Section 2, the empirical literature on privatization clearly demonstrates that it has positive microeconomic effects. In our own study's microeconomic analysis in Section 3, we calculated that aggressive privatization would create a direct benefit to the Egyptian central government budget of approximately LE 100 billion in present value terms. What are the channels through which these microeconomic benefits translate into improved macroeconomic performance? The following figure provides an overview, using the five major criteria that we identified in Section 1.2 above.

Figure 1: Macroeconomic Effects of Aggressive Privatization

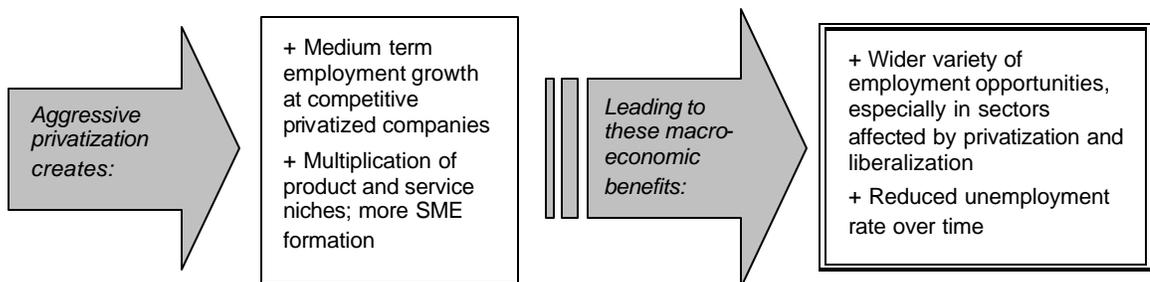
a. Budget



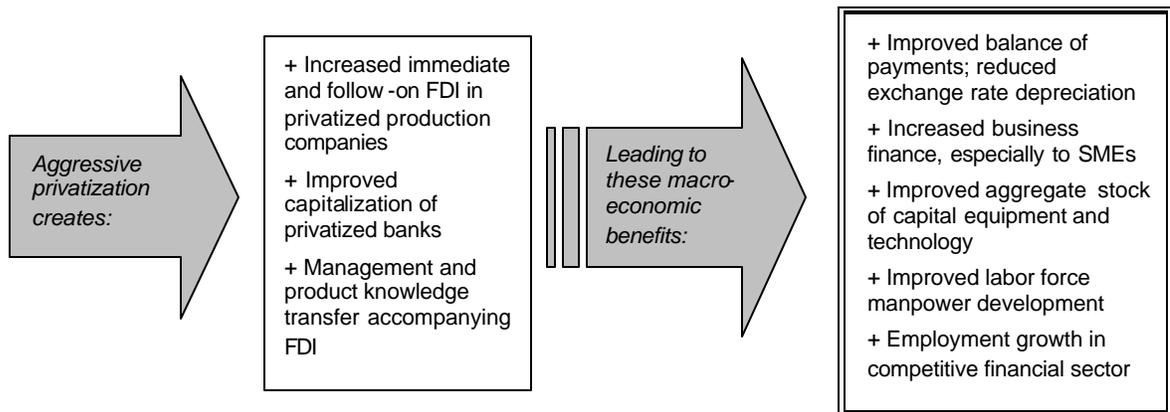
b. Competitiveness



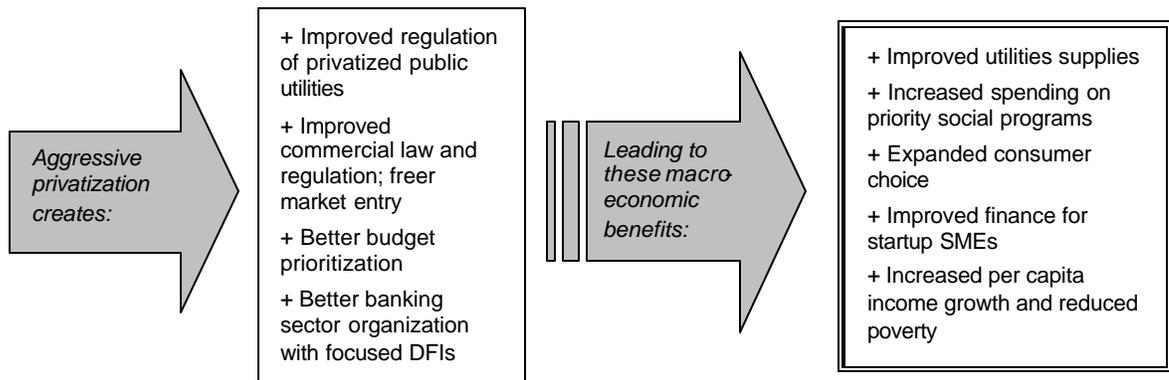
c. Employment



d. Foreign Investment and Business Finance



e. Social Welfare



Construction of a general macroeconomic model for Egypt this study to estimate these effects was beyond the scope of this study. However, we have attempted empirically to gauge them through analysis of four different data sets, each addressing the issue from a different point of view:

- First, we aggregate the operating results of Egypt's Law 203 companies and calculate their direct impact on the performance of the overall Egyptian economy.
- Second, we examine 10-year sectoral employment changes in Egypt to characterize the crucial relationship between privatization and employment.
- Third, we compare broad indicators of macroeconomic performance for Egypt with those of other important developing economies, seek to correlate them with privatization, and derive estimates of the macroeconomic costs Egypt has incurred over the past decade by failing to pursue an aggressive privatization policy.
- Finally, we contrast Egypt's own macroeconomic performance between the years of more active privatization in the late 90s and the much slower progress of recent

years, and use these data to create projections of medium-term macroeconomic performance under alternative privatization policies.

Together, and if consistent, these four independent approaches should allow us to assess with some confidence the macroeconomic costs of not privatizing.

6.2 Macroeconomic Implications of Microeconomic Analysis

In this section we aggregate the Law 203 companies, whose direct fiscal cost of not privatizing was analyzed and estimated in Section 3 above. The following table summarizes the performance data for these 174 companies in the latest fiscal year for which complete data are available.

Sector	# Cos	Revenue	Growth 3-yr Avg	Net Income	Profit Rate	Depr	Profit Tax	Bank Debt	Wgs & Sals	Wage Share	Empl 000	Rev / Head
Retail	12	2,878	3.8%	(60)	-2.1%	25	8	699	204	7.1%	27	106
Spinning & Wvng.	32	2,305	2.2%	(2,054)	-89.1%	172	3	8,602	977	42.4%	129	15
Cotton Ginning	8	1,417	4.6%	67	4.7%	7	7	2,741	80	5.6%	6	284
Mining & Metals	14	4,529	-1.8%	(40)	-0.9%	392	0	7,598	739	16.3%	47	96
Construction	24	3,832	-6.6%	304	7.9%	107	47	1,467	456	11.9%	40	94
Transportation	14	1,805	-1.5%	174	9.7%	163	78	530	331	18.3%	34	53
Tourism/ Ent. ⁶⁹	5	488	-0.8%	247	50.7%	50	10	108	69	14.2%	5	97
Food	17	6,140	-4.6%	293	4.8%	211	7	1,751	559	9.1%	65	95
Pharmaceuticals	11	3,567	5.1%	354	9.9%	63	128	435	295	8.3%	21	167
Chemicals	8	862	48.0%	(14)	-1.6%	83	9	1,023	198	22.9%	12	72
Tobacco	1	2,673	7.0%	282	10.5%	204	102	72	193	7.2%	13	212
Other Manufact.	29	1,826	20.8%	(402)	-22.0%	148	4	2,878	461	25.3%	40	45
TOTALS	175	32,323	2.3%	(849)	-2.6%	1,623	403	27,902	4,562	14.1%	437	74

Data source: PEO

These data imply significant costs of state ownership for macroeconomic performance, as described in the following.

Growth and Employment

The total revenues of the 174 Law 203 companies still under public ownership was LE 32.3 billion in 2001, 8.5% of GDP. These companies experienced average annual revenue growth over the three years to 2002 of only 2.3%. For the total economy, average annual growth was three times that rate, at about 8%. Had the PEs grown at the average rate for the total economy, aggregate nominal GDP growth would have been 0.5 percentage points higher per annum, or 8.5%, and revenue for these companies would have been LE 38.5 billion by 2002— LE 6.2 billion more than was actually achieved.

⁶⁹ Tourism and Entertainment revenue and net income include the results of a major hotel holding company whose revenues reflect profits after hotel operating costs.

It is difficult to infer from these results any substantial negative effect of privatization on employment. Normally privatization generates direct employment losses as staff size, formerly serving state welfare goals, is reduced in the interests of private sector efficiency and competitiveness.⁷⁰ However, the overall average revenues / employee ratio in the Law 203 companies is comparable to that of the manufacturing economy at large.⁷¹ Furthermore, the wage share of revenues, at 14.1%, does not seem excessive. This suggests that for most privatizable sectors, much of the needed labor force downsizing may already have occurred. Therefore, the growth and profitability problems are probably more a function of equipment obsolescence and poor business operations management than of overstaffing.

In some sectors, however, overemployment is extreme. In a recent study of two Egyptian companies in the spinning, knitting, and weaving industry, Assaad (2003) surveyed 562 workers by questionnaire, and concluded that workers were well aware of substantial excess labor in these companies. The aggregate results presented in Table 22 above, showing revenues per worker of only LE 15,000 per annum in this sector – which cannot exceed average annual pay by much, if at all – clearly support this finding.

Profitability and Profit Taxes

The overall profitability of the Law 203 companies was negative LE 849 million– minus 2.6% of revenues. This is considerably worse than the result for the whole economy, which is estimated at approximately 5%. This aggregate result reflects mixed sectoral performance. Most of the loss came from the textiles sector. However, only six of the twelve sectors achieved profitability in the neighborhood of 5% or greater. These six sectors accounted for over 80 percent of the total LE 403 million in profit taxes paid by the Law 203 companies in 2002. Had the Law 203 companies grown at the rate of the private economy, and achieved its average profit rate, profit taxes paid would have been on the order of LE 650 million,⁷² LE 250 million higher than they actually were, and would have financed 2.9% of the year's central government budget deficit, instead of the actual 1.8%.

Capital Investment and FDI

Based on individual case studies and anecdotal evidence, there is significant underinvestment in capital equipment in these unprivatized companies. They are “using up” their capital equipment without replacing or modernizing it, because the public sector does not have the resources to maintain an appropriate capital spending plan, in aggregate the companies are already overleveraged, and their low profitability limits reinvestible cash flow. The result is a vicious circle of growing inefficiency.

Despite this underinvestment, total bank debt of the Law 203 companies relative to their revenues is 86%, substantially above the non-government bank credit / GDP ratio of 67% for the broader economy. It appears that the PE sector's heavy use of bank credit has to a significant extent funded ongoing operational deficits, rather than capital investment.

Underinvestment in capital equipment under state ownership detracts from aggregate demand and therefore overall economic growth. Privatization could be expected to generate a near-term surge in capital spending which would help offset the impact of any labor shedding on aggregate demand and overall unemployment.

⁷⁰ Birdsall and Nellis (2002) note that estimates of 20 to 30 percent overstaffing are common in the empirical literature, and cite cases much worse than that.

⁷¹ The Economist Economic Intelligence Unit (2003) estimate for Egypt is LE 55,000.

⁷² The assumed profit tax rate is 22.1%, the actual average rate paid by the companies in the group which earned profits.

6.3 Employment and Privatization in Egypt

To a large extent, the struggle over whether to privatize quickly or gradually is a struggle over employment. Even reformist countries which have privatized relatively rapidly, such as Poland and the Czech Republic, still have not privatized some large heavy industrial combines in regions where they are the dominant employers. We need to understand the dynamics of employment in Egypt, and the connections between privatizing and job development, in order to properly assess the costs of not privatizing.

6.3.1 Trends in Egyptian Employment

Assaad (2002) has produced what is surely the most authoritative study to date on the employment effects of privatization in Egypt and how to address them. She surveys Egyptian labor markets in some detail. The following table is drawn from her data, based on an ERF⁷³ (2000) report surveying results from extensive Egyptian household employment surveys in 1988 and 1998, which incorporated both formal and informal employment.

Sector	1988		1998		Change	
	#	% Tot	#	% Tot	#	%
Public Enterprises	1831	12%	1638	8%	-193	-11%
Private Non-Agriculture	4697	30%	6378	32%	1681	36%
Government Services	2378	15%	4089	20%	1711	72%
Agriculture	6755	43%	7926	40%	1171	17%
Total Employment	15661	100%	20031	100%	4370	28%
Labor Force	16882		22113		5231	31%
Unemployment	1221		2082		861	71%
Unemployment Rate	7.2%		9.4%		+2.2%	

Source: ERF (2000), in Assaad (2002). Public enterprises employment includes all state-owned providers of goods and services (not just Law 203 companies).

These data tell several interesting stories. First, employment in public enterprises did fall over the decade, by 193,000 people, and the period covered includes the bulk of privatizations which have occurred since the ERSAP was launched in 1991. Second, this decline, less than one percent of the 1998 labor force, was much more than offset by growth in private non-agricultural employment, which grew by 1.7 million, or 36%, significantly faster than the growth rate of total employment and of the labor force itself. As a result, the share of the private non-agricultural sector in employment grew, to about one-third of the total.

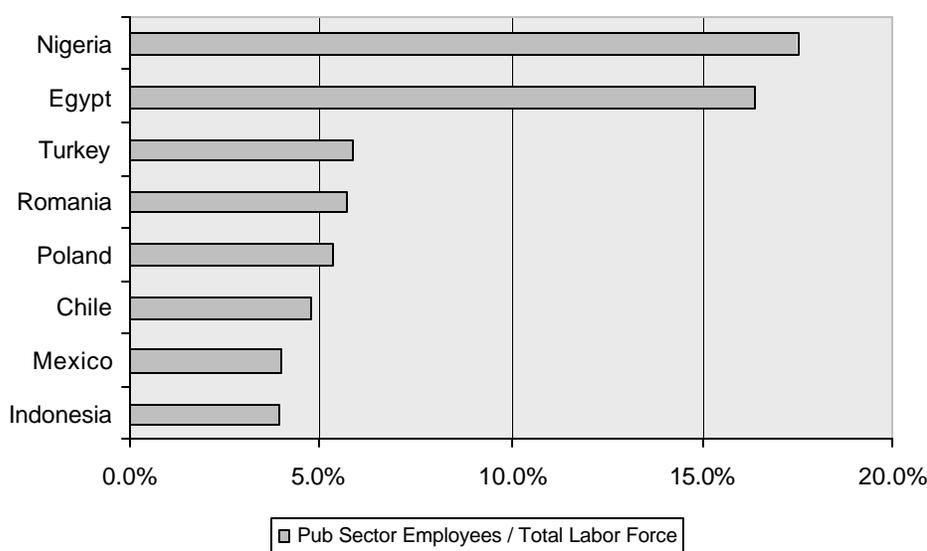
Third, agriculture sector employment grew by 17%, or 1.2 million people, but this was only about half the rate of growth of the total labor force. Agriculture sector productivity grew markedly – output grew by at least double the rate of employment growth. Therefore, though it remained the largest employer, the share of agricultural in total employment fell significantly, to 40% of the labor force. In order to match the expansion of the total labor force, and avoid adding to unemployment pressure, agricultural labor would have needed to grow by an additional 1 million people. Especially given the decline in public enterprises employment, employment in other sectors had to expand more rapidly. In fact, despite the

⁷³ The Economic Research Forum for the Arab Countries, Iran, and Turkey

significant growth in private non-agricultural employment, it was far from enough to make up for the sharp slowdown in employment growth in agriculture.

Government, it seems, strove to take up the slack. Government sector employment grew by a remarkable 72%, adding 1.7 million employees over this decade, its share of total employment rising from 15 percent to 20 percent. Returning to public enterprises employment, this also accounts for its relatively modest decline, of only 11%, and more fundamentally, for the increasingly gradualistic approach of the GOE to privatization in Egypt. As a result, Egypt now has a three times greater share of public sector employment in total employment than do major developing countries with which it is comparable, as seen in the following chart:

Figure 2: Public Sector Employment⁷⁴
2002



Of this group, only Nigeria's share is higher than Egypt's – marginally.

Even helped by this dramatic expansion of government employment, the 4.4 million increase in total employment in Egypt over these ten years fell well short of the demographically-driven 5.2 million increase in the labor force. Consequently, unemployment rose substantially, by 860,000 to 2.1 million people, and the unemployment rate grew by over two percentage points, to 9.4 percent.

Viewed against this background, the transitional unemployment effects of an aggressive privatization strategy are significant, but are not the major issue. No one would suggest that quick privatization would require aggregate PE labor force downsizing of more than say one-third – at most 400,000 more people. Add to this perhaps 100,000 redundancies in the economic authorities that are not now commercially run, and even as many as 500,000 more who would be shed from the government directly if it were truly committed to getting out of

⁷⁴ Data Source: *World Bank Administrative & Civil Service Reform* statistics. Public sector employees include central and subnational govt administration, education, and health workers. Police, army, and SOE employees are excluded due to data limitations. Data for Nigeria are IBM Consulting estimate based on reported public sector share of formal employment.

the business of ongoing intervention in commercial business operations. These very rough numbers, thrown out just to dimension the worst case, come to 1 million people. But the private sector needed to create over 5 million jobs just to absorb the increase in the labor force over the 10-year period reviewed above, plus another 1 million to make up for the agricultural sector's productivity improvement-induced employment growth slowdown.

In other words, Egypt's employment problem goes well beyond the issue of privatization-induced labor force downsizing. The fundamental issue is the ability of the private sector to generate employment. Whether or not privatization is adding to employment growth needs elsewhere, the private non-agricultural sector needs to be creating some 400,000 jobs per year. Another 100,000 per year to absorb privatization-induced labor force downsizing is significant but not the main problem.

6.3.2 Privatization and Prospects for Employment Growth

Studies of the effect of privatization on employment, as well as Egypt's own experience to date, leave little doubt that job losses are on the whole significant to severe in affected firms. This should come as no surprise to anyone on either side of the privatization debate. Assaad's study found that employees in the Egyptian state-owned spinning and weaving industry were fully aware of overemployment at their firms. Data provided for this study by the PEO listed employment before and after privatization for 44 companies for which data were available. Employment fell in 39 of the 44 companies, and total employment fell by 23%. Employment changes in the 44 companies ranged from minus 76 percent to plus 27 percent.

The big question is not the predictable direct negative effect of privatization on employment in privatized companies. It is macroeconomic: can the rest of the private sector expand enough to absorb the excess labor released by privatization? Indeed, does privatization itself, by stimulating the development of the private sector, evoke countervailing employment forces?

In Egypt, as we saw above, private sector employment has not grown by nearly enough to accommodate reduction in PE employment on top of other fundamental trends in the economy (such as much-needed increased mechanization and efficiency in agriculture).

In Egypt's employment experience there is much information. Privatization in itself is not enough, nor can it be expected to be enough, to generate an overall surge in private sector employment. The most that can be expected from privatization alone is that the privatized companies themselves will, within a few years, become much more competitive as a result of being privatized, and will start to add employees again. This pattern has in fact been demonstrated in a number of cases in other countries. The problem is that it takes several years, and this often puts it out of the realm of political feasibility. So privatization is delayed.

The only way that privatization can be expected not to worsen unemployment is if it is just one part of a contemporaneous, thoroughgoing reform strategy focused wholeheartedly on creating the best possible conditions for expansion of the private sector. Those countries which have quickly overcome the negative effects of privatization on employment are those which were at the same time implementing broad, market-oriented economic reform strategies, primarily involving clear definition of property rights, removal of the state from economic management, rooting out all state-created obstacles to reasonable and legitimate private sector competitive activities, and ensuring an adequate flow of business finance.

Egypt, like other developing countries struggling with liberalization, has not done this. Because it has not "de-state-ized", the private sector fails to grow fast enough to absorb privatization-induced labor shedding. Indeed, even without privatization, the Egyptian economy would have severe unemployment problems as a result of the failure to implement thorough reform that would unleash the private sector, because it is a country whose very

high level of employment in agriculture, a major symptom of underdevelopment, for basic scientific and globalization reasons, will inexorably decline. This secular trend is much more demanding of growth in non-agricultural private sector employment than is the relatively modest impact of employees released by companies moving from the public to the private sector, which will as a whole in fact retain the majority of their employees.

In other words, not privatizing in Egypt is just one aspect of its gradualism in overall economic reform, and it is the latter that is really creating the larger employment costs.

Egypt's inability to develop a business-friendly environment is reflected in the huge size of its informal sector. Assaad (2002) observes that "the private informal sector far overshadows the private formal sector". Reviewing several studies of Egypt's informal sector in her description of the employment picture, she concludes that it represents *between 75 and 90 percent of total private non-agricultural employment*⁷⁵ Though it has clearly absorbed most of the surplus labor and entering labor and will continue to do so, the data in Table 23 above, which include informal employment, show that even it cannot expand as needed without real reform.

There are, even in Egyptian employment data, indications of the potential of reform to trigger impressive job gains. Assaad (2002) also breaks out employment data on product sectors within the broad private non-agricultural sector, as summarized in the following table.⁷⁶

Table 24: Change in Private Sector Employment by Sector			
<i>Egypt, 1988 – 1998, thousands</i>			
Industry	Job Growth	# New Jobs	Total Jobs
Finance, Insurance, Real Estate	139%	75	129
Transport, Storage, Communication	64%	160	408
Manufacturing	61%	501	1318
Trade, Restaurants, Hotels	51%	257	762
Construction	44%	258	848
Others	33%	137	554
Total	54%	1388	4019

Source: Assaad (2002)

This ranking by total job growth over the 1988-98 period probably reflects rather closely the importance of competitive liberalization of these industry sectors. Substantial reform effort has gone into the financial sector, whose employment has as a result grown strongly, by 139%, to 129,000. Significant competitive opportunities have arisen in transport and communications due to a degree of liberalization, but mainly because of technological changes in products themselves. Manufacturing has benefited from some reforms, and has probably gained opportunities as a result of globalization and foreign direct investment in Egypt. The tourism sector has enjoyed focus on improving its competitiveness, and even though many hotels have not been privatized, management outsourcing has had some

⁷⁵ Assaad (2002), pp. 51-52.

⁷⁶ The difference between total employment in this table and the total for private non-agricultural employment in the preceding table is non-wage private non-agricultural employment – over two million informal sector employees.

beneficial effect. It is enticing to think of how much stronger these gains could have been in an environment of thorough economic liberalization.

6.4 Cross-Country Comparison – Macroeconomic Performance Indicators

The decade of the 1990s saw massive efforts at economic reform across the transition region after the collapse of Communism, and in much of the older “Third world” as the tenets of the “Washington consensus” came to be accepted in at least some form.⁷⁷ With this decade of experience to look at, major stock-takings have recently emerged, of which USAID (2002) may be the most thorough. These reports, rather than trying to isolate the effects of individual components of economic growth-promoting reform – commercial law, privatization, business development, trade, macroeconomic stabilization, financial sector development – instead try to classify countries according to how rapidly, comprehensively, and effectively they have pursued reform. Since privatization is a fundamental component of economic reform – perhaps its “leading indicator” – these categorizations correspond to our division between gradualistic privatization and aggressive privatization.

USAID (2002), from a background paper by Hannon and Rhee (2002), characterized developing and transition countries as “normal integrators” or “slow integrators”, based on their openness to international trade. Other relevant indices or rankings are those for “economic freedom” (Heritage Foundation), competitiveness (World Economic Forum), and corruption (Transparency International).

We have selected a group of six developing countries with larger populations with which it is interesting to compare Egypt. These are grouped as follows:

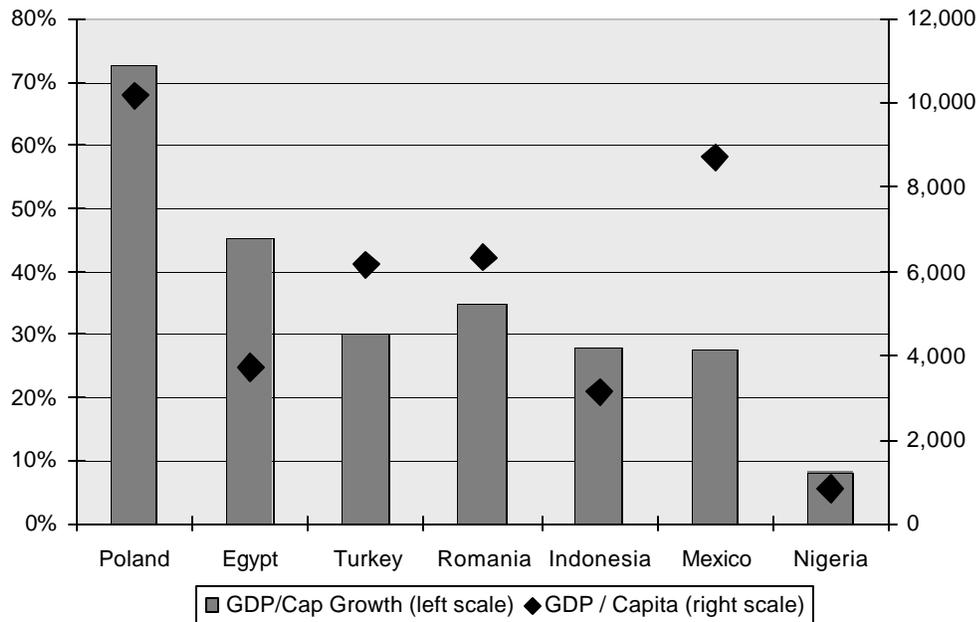
- Poland, representative of the “normal integrators” in USAID (2002), scoring in the upper third of developing countries in the economic freedom, competitiveness, and (anti)corruption rankings. Poland, famous for its adoption of “shock therapy” in the early 90s, moved rapidly to transition to a market economy. Poland is an “aggressive privatizer” in our vernacular.
- Nigeria, at the other end, representing the “slow integrators”, the world’s largest extremely poor country, scoring toward the bottom of world rankings for economic freedom, competitiveness, and corruption. Despite verbal commitment to a series of reform plans dating all the way back to independence, Nigeria has consistently failed to implement change.
- Egypt, Turkey, Romania, Indonesia, and Mexico, all in the middle, with privatization and reform programs in place, with varying degrees of real progress, and with stated political commitment to change. However, implementation of reform in all of these countries is gradualistic, periodically stalled by dominant political interests and impeded by powerful social pressure groups. These countries are “gradualistic privatizers” in our context.

⁷⁷ See Williamson (2002)

The following chart provides major indicators in real terms for this country group.

Figure 3: Comparative Real Indicators

Change, 1992-2002 (left scale); Level, 2002 (right scale)



Data source: World Bank *World Development Indicators*. Real GDP is constant local currency units. GDP / capita data are PPP-based

Clearly Poland, representing the rapid reformers, has shown the greatest gains in the most basic metric of economic growth and welfare, namely per capita GDP, which grew by 73% over the decade to 2002, from \$5,900 to \$10,200. Real GDP, meanwhile, grew by 53%.

In Nigeria, meanwhile, at the other extreme in terms of economic reform, real GDP grew by 23% over the decade, but GDP per capita rose only 8%, to just \$850.

The other countries, in the middle, show mixed results. Egypt has done better than the other members of this group in terms of economic growth (54%) and growth in GDP per capita – 45%, versus an average of about 30% for the other four. However, with Indonesia it has the lowest actual level of GDP per capita in the group, at only \$3700 (purchasing power parity basis), compared to over \$6000 for Turkey and Romania and \$8700 for Mexico.

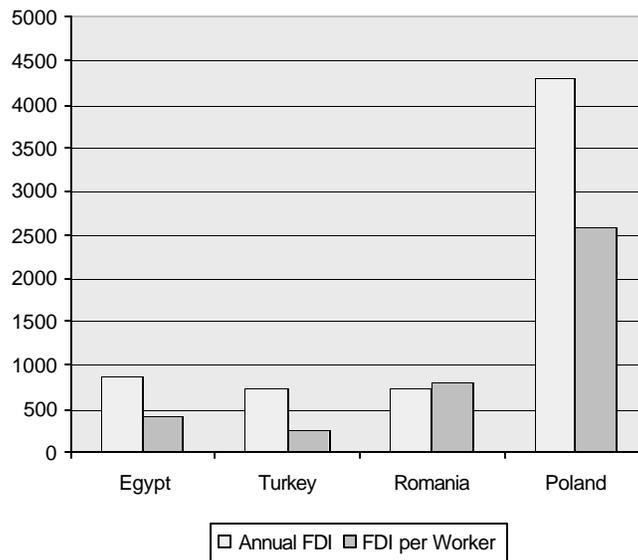
The conclusion is that rapid reform produces the fastest economic growth per capita, failure to reform leads to very disappointing growth results, and the gradualistic, stop-and-start programs produce mixed, less satisfying results. Still, it must also be said that any reform is better than none – all of these countries except for Nigeria certainly have adopted reform in principle and to a real degree in fact, and all experienced significant increases in income per capita over the decade of the 90s.

As summarized in Table 25, these comparative results are used to counterfactually simulate the potential performance of the Egyptian economy if it became an “aggressive privatizer”. (See assumptions in Appendix IV.) Using Poland as the reference case, we find that in a

conservative scenario, where Egypt achieved one-half of the difference between the growth in its PPP GDP per capita and that of Poland, its average annual real GDP growth over the decade of the 90s would have been 25% higher (5.5% instead of 4.4%), its GDP per capita would have been \$4,050, 10% higher at the end of the period, and its total employment would have grown by 5.1 million instead of 4.4 million. With actual labor force growth to 5.2 million, this would have reduced the unemployment rate from 9.4% at the end of the period to 6.0%. In a “best case” scenario, where Egypt performs at the level of Poland in terms of GDP per capita growth, average annual real GDP growth would have been almost 50% higher, at 6.5%, PPP GDP per capita would have been \$4,400, one-fifth higher, and employment growth would have been 5.4 million, leaving Egypt’s end-of-period unemployment rate at just 4.7%.

We also compared foreign direct investment across these countries. The following figure presents a subset of these findings.

Figure 4: FDI Indicators
1991-2002



Foreign direct investment in developing and transition economies is affected by a number of variables in addition to the pace of economic reform. For this reason Egypt could not be expected to match the performance in terms of FDI per worker of Poland, representing rapid reformers but also located adjacent to Western Europe and soon to enter the EU. However, even if Egypt could have attained just one third the level of FDI per worker of Poland over the past decade, its cumulative FDI would have doubled, from \$11 billion to over \$22 billion.

	Actual	Potential	
		Level	Gain
Annual Real GDP Growth	4.4%	5.5%	25%
GDP / Capita (PPP basis)	\$3,700	\$4,050	10%
Employment Growth, millions	4.4	5.1	17%
Unemployment Rate	9.4%	6.0%	-36%
Cumulative FDI, \$ billions	\$10.7	\$22.2	108%

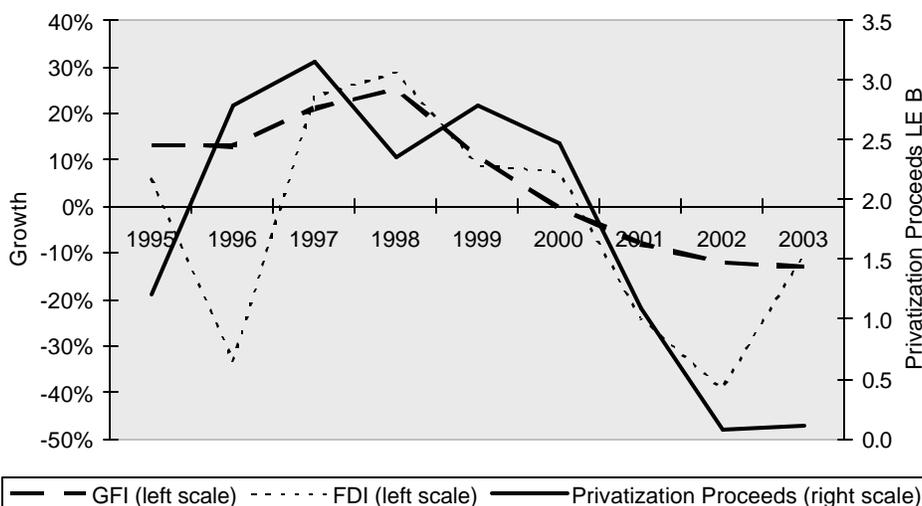
In the absence of a fully-specified macroeconomic model, these simulations are only suggestive. However, a macro model must rely on coefficient estimates, and the counterfactual simulation approach we have adopted here – one used by other investigators of the potential benefits of privatization – is a simple method of setting transparent projection coefficients, producing results that may be qualified but are certainly indicative.

6.5 Macroeconomic Costs and Egypt’s Own Privatization Experience

6.5.1 Investment, Growth, and Employment

We can observe relationships among key economic time series in Egypt over the past decade, and from this form quantitative estimates of the possible impact of privatization. The following chart shows gross fixed investment (GFI), foreign direct investment (FDI), and privatization proceeds in Egypt from 1995-2003.⁷⁸

Figure 5: Privatization and Investment



⁷⁸ To smooth year-to-year variability, especially in FDI, both investment series are measured by two-year moving averages. Data are from Economist Intelligence Unit (2003), most of which are drawn from IMF sources.

This chart shows an unmistakable correlation between these three variables. During the time of more aggressive privatization in Egypt, 1996-99, foreign direct investment rose strongly, and with it overall gross fixed investment. When privatization activity thereafter collapsed, the growth of both FDI and GFI became substantially negative.

The following observations on these relationships drawn from the Egyptian data guide specification of coefficients in some simple macroeconomic relationships for Egypt.

- *Privatization and FDI.* As reviewed above, at least one-fourth of Egyptian FDI over the past decade is accounted for by privatization. While the relationship between privatization proceeds and FDI shows significant variability, the elevated privatization proceeds of the late 90s clearly correlate to relatively high FDI in those years, and the sharp decline in privatization proceeds in the early 2000s correlates with negative FDI growth then.
- *FDI and GFI.* The chart shows that the late 90s period of more determined privatization and higher FDI also saw relatively robust growth in overall gross fixed investment in Egypt. Between 1993 and 1999, annual GFI more than doubled, from LE 25 billion to almost LE 60 billion. But as privatization slowed and FDI fell in the subsequent five years, GFI stagnated, rising hardly at all to LE 63 billion in 2003.
- *GFI and GDP.* GDP growth in Egypt also declined sharply over the decade under review. The ratio of GDP to GFI shows substantial stability over time. The trend in the growth rate of GDP has declined at about half the rate of the trend in the growth rate of GFI.
- *Employment and GDP.* We project employment by dividing our estimates of GDP by trend GDP per employee, a broad measure of productivity. Productivity growth measured on this basis has declined from an average of 8.5% per annum in the late 90s to 4.5% per annum in the early 2000s. In the aggressive privatization case, we assume faster productivity growth than in the status quo case.

The following table summarizes our results from projection of this model under the two scenarios. (See Appendix IV for assumptions.)

	Actual		Projected 2004-08	
	1996-00	2001-03	Slow Pvtz	Rapid Pvtz
Privatization Proceeds	2.7	0.4	0.7	4.9
Foreign Direct Investment	3.4	2.3	2.8	6.1
Gross Fixed Investment	52.4	61.0	65.8	106.5
Nominal GDP	281.1	379.6	469.0	596.7
<i>Nominal GDP growth</i>	10.7%	5.6%	5.5%	13.8%
Employment Growth <i>000</i>	499	173	266	662
Unemployment Rate <i>(period end)</i>	7.9%	11.1%	14.5%	5.8%

The projected slow privatization scenario basically carries forward the status quo experienced over the past three years, with moderate increases in privatization proceeds, FDI, and GFI, compared to the 2001-03 period, leading to a continuation of slow growth in GDP. As a result, average annual employment growth is less than 300,000, versus

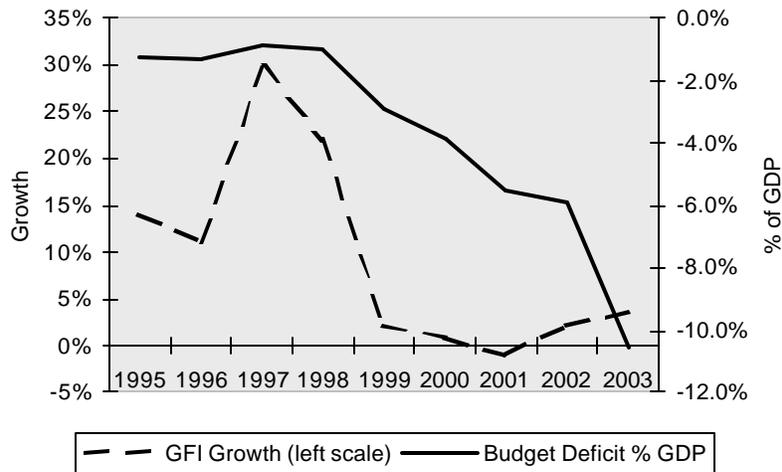
prospective annual labor force growth of 470,000. The unemployment rate ends up rising to 14.5%.

The rapid privatization case is constructed so that the great majority of presently privatizable assets are sold within the next 3-4 years. With average annual privatization proceeds rising to almost LE 5 billion, some LE 25 billion would be raised over the five-year projection period. This would help generate a surge in FDI, to an annual average of LE 6 billion (about \$1 billion at projected exchange rates). This in turn would be associated with a resumption of the expansion of GFI at the rates experienced in the rapid privatization period of the 90s, prompting a much faster expansion of GDP. As a result, even with higher productivity growth associated with greater economic efficiency, employment growth could be expected to rise by over 600,000 per year, providing for a sharp decline in the unemployment rate to 5.8% by the end of the period.

These results, based on Egypt's own actual experience, are broadly consistent with those in Section 6.4 above, generated in an entirely different manner by simulating Egyptian macroeconomic performance at the level of rapid privatizing countries such as Poland.

Another way of connecting our estimate of the budgetary cost of not privatizing to macroeconomic performance is to observe the correlation between the GOE budget deficit and the growth of gross fixed investment, as displayed in the following chart:

Figure 6: Fiscal Deficit and Investment



This chart illustrates for Egypt the well-established “crowding out” effect of excessive government borrowing on private credit. It shows that the stagnation in the growth of gross fixed investment in Egypt corresponds to the sharp deterioration in Egypt's central government budget deficit over the past five years, from approximate balance to negative 10% of GDP this year. In our microeconomic analysis, we estimated LE 100 billion as the budgetary cost of not privatizing over the next five years, an amount that represents 4-5% of GDP over this period. This would keep the overall budget deficit under substantial pressure and prevent a recovery in domestic investment. If reversed under an aggressive privatization program, the aggregate budget deficit could instead be reduced by 50%, and the availability of finance to the private sector increased by up to 20%, creating the conditions for a resurgence of domestic fixed investment.

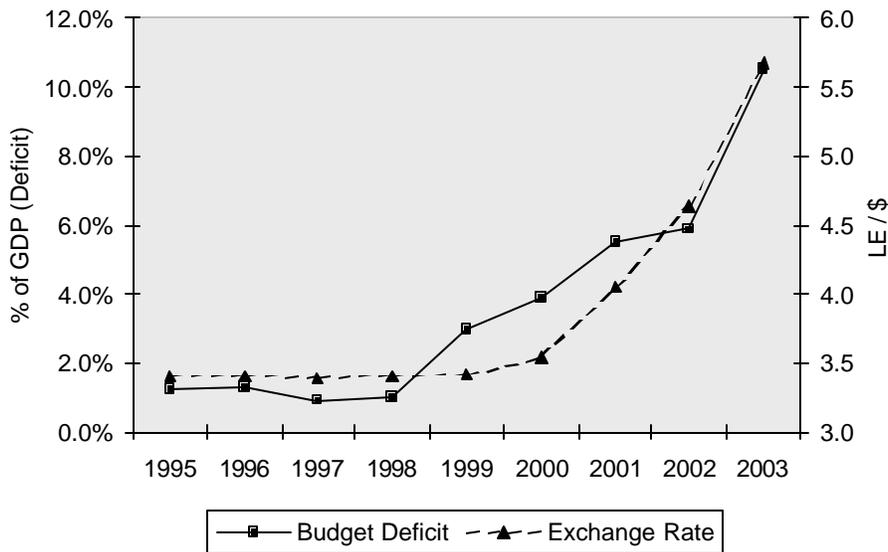
Our results are consistent with those of Galal (1996), who estimated the relationship between privatization and domestic savings in Egypt. He found that privatization of one-third of the then-PEs would produce an additional 2.4% of domestic savings – about half the amount that we infer under full privatization.

6.5.2 Budget Deficit and the Exchange Rate

The most direct macroeconomic effect of privatization is via its impact on the government budget. As capsulized in Figure 1 above, which describes the various channels through which privatization can effect macroeconomic performance, it is primarily through the budgetary channel that privatization can have important effects on inflation and the exchange rate. These are crucial variables for Egypt.

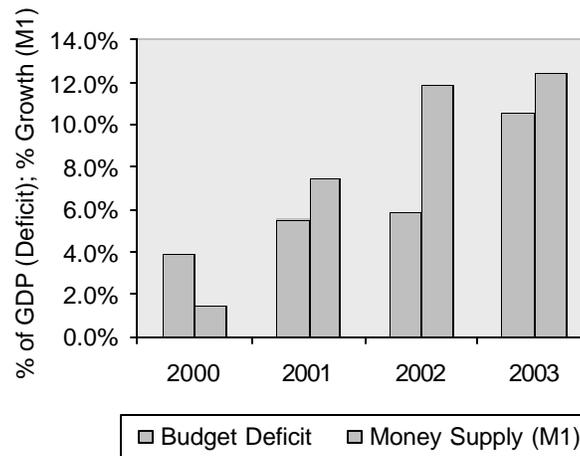
The following figure charts Egypt’s budget deficit as a percentage of GDP, the annual growth rate of the M1 money supply, and the Egyptian pound exchange rate.

Figure 7: Budget Deficit and Exchange Rate



There is a striking correlation between the Egyptian central government budget deficit as a percent of GDP (expressed as a positive – i.e. a higher value means a higher deficit/GDP) and the Egyptian pound exchange rate. The statistical correlation coefficient between these unadjusted series is 0.95. This relationship works through the effect of budget deficits on monetary growth and inflation pressures, and through the impact of deteriorating government finances on the confidence of foreign investors and domestic savers in the value of the currency. The relationship between the budget deficit and money growth in recent years is indicated in the following figure.

Figure 8: Budget Deficit and Money Growth



As the budget deficit has expanded from under 4 percent of GDP to over 10 percent, money growth has surged from under 2 percent per annum to over 12 percent.

The value of the Egyptian pound is clearly of great concern, and at this writing, despite further depreciation to over 6 LE/\$, expectations have not stabilized. Until they do foreign investment will tend to be withheld and domestic savers will try to keep their capital abroad.

Again, the deterioration of the budget deficit coincides with the reduction in privatization activity. Adoption of an aggressive privatization policy would have a substantial direct positive effect on Egypt's fiscal stability, reducing the budget deficit over the next five years by almost half. It would reduce monetary growth and inflation pressure, and could also be expected to boost investor confidence in Egypt's economic direction, putting a floor under the pound's depreciation.

7. Institutions of Privatization

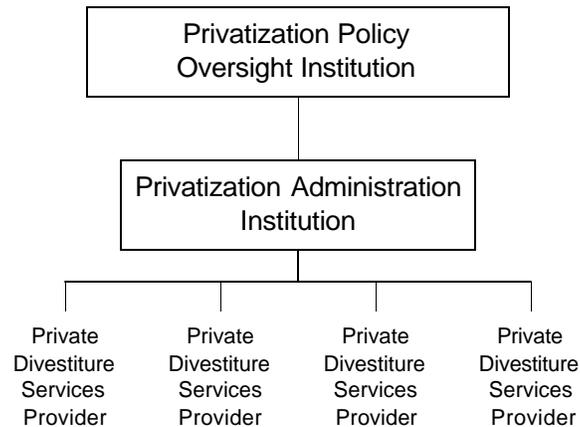
The previous sections of this report have measured the microeconomic and macroeconomic costs of not privatizing in Egypt, both of which appear to be substantial. The empirical record reviewed above has demonstrated that state-owned companies need to be privatized for reasons of efficiency and fiscal management. However, there are potential costs of privatization, so that there remains a role for government regulation to promote public welfare. This is the "business" of government. Governments are much better off focusing on developing and efficiently applying regulation to properly restrain undesirable monopoly practices and encourage competitive business growth, and social support programs to protect the unemployed, than they are trying somehow to ensure public welfare by managing companies.

There are two sets of government institutions needed for effective privatization. First are those agencies which implement the privatization process itself, and second are those which facilitate fair operation of the economy after privatization.

7.1 Privatization Implementing Institutions

7.1.1 Efficient Privatization Implementation Structure

Privatization implementation institutions are the set of government bodies and agencies which authorize and execute privatization transactions. The following diagram represents these institutions in simplest terms:



There are three primary functional areas in privatization:

- (i) *Privatization policy*, i.e., general oversight to interpret public policy and ensure that privatization is carried out according to it, which is the responsibility of the Privatization Policy Oversight Institution (a ministerial committee, ministry, or other apex authority body)
- (ii) *Privatization administration*, i.e., administrative organization and supervision of the privatization process, which is the responsibility of the Privatization Administration Institution (an independent agency, a department in a ministry, a related body with administrative authority, etc.), and
- (iii) *Privatization execution*, i.e., implementation of privatization transactions, largely the responsibility of private sector experts engaged under clear mandates in competitive tenders.

In our study, we use the above broad framework to evaluate Egypt's privatization institutional structure, and to compare it to those of selected other developing and transition economies who have gone through and are going through the privatization process. We find that privatization implementation institutional structures vary significantly. The aggressive privatizers have the simplest structures, with a single apex body (such as a ministerial committee) involved primarily in policy, sometimes with a consent role for the largest transactions. Their privatization administration agencies have a clear mission to sell companies, a great deal of transactions authority, no role in the management of state-owned companies, and a practice of distributing the bulk of privatization execution work to private sector experts.

The slow privatizers tend to have much more complex privatization implementing institutions. Apex policy authority is diffuse and conflated with privatization transactions implementation. Roles and responsibilities across the institutional structure are often severely overlapping, with responsibility handed from agency to agency and back. The result is indecision and extreme delay in implementing privatization. We find that Egypt's privatization

implementation structure has many of these characteristics, and therefore accounts in part for the severe slowdown in privatization activity in recent years.

7.2 Post-Privatization Facilitating Institutions

When the lead in economic growth is turned over to the private sector, government relinquishes its economic management function, but retains its welfare protection function. Government must establish institutions which facilitate privatization by ensuring that the welfare issues which privatization creates are addressed.

There are four basic institutional areas for facilitating privatization.

- (i) A commercial legal and regulatory environment that is friendly to new business creation (minimizes red tape) and promotes competition and free entry into all commercial sectors.
- (ii) A labor legal and regulatory environment that promotes flexibility and mobility by giving employers reasonable rights in laying off workers and unobstructed hiring rights.
- (iii) A mutually-reinforcing set of transitional social support programs that dovetail closely with privatization-related employment reductions.
- (iv) A utilities regulatory regime that mandates core pricing and service provision requirements for private producers of essential widely-used goods and services, and a competition policy regime that prevents monopolistic concentration of economic power in other industries.

Countries with institutions in place have been able to implement aggressive privatization programs while minimizing social unrest. Egypt needs to accelerate reforms in all four areas.

In fact, Egypt's *commercial legal and regulatory environment* is widely judged to be burdened by excessive red tape, unnecessarily restrictive permitting, inadequate protection of property rights, etc. The following table shows 2003 ratings for Egypt by The Economist Intelligence Unit (EIU), and objective and experienced evaluator of economic and business conditions in many developing countries.

Table 27: Business Environment Ratings	
<i>The Economist Intelligence Unit</i>	
Standard	2003 Score
Setting up new businesses (5=low regulation)	2
Freedom to compete (5=good)	3
Degree of property rights protection (5=high)	3
Promotion of competition (5=high)	3
Price controls (5=few)	3
State ownership / control (5=low)	2
Restrictiveness of labor laws (5=low)	3
Hiring of foreign nationals (5=easy)	3
Overall policy toward private enterprise (10=good)	4.7

In *utilities regulation*, Egypt is establishing a structure as it corporatizes the major utilities providers. It has corporatized the telephone company and the electric company, and is proceeding with the water companies. Utilities regulation would probably proceed more quickly and more effectively if it were tied to a firm timetable for privatizing these utilities.

With respect to *social policy*, Egypt finds itself in the familiar position for statist economies: because of the inefficiencies and costs they bear in managing the economy and attempting to use it for social welfare purposes, the state does not have the resources to undertake more effective, high-impact social welfare programs. The expanding budget deficit makes it harder and harder to do so.

Egypt has for years been more or less frozen in indecisiveness, like someone postponing an elective surgery, fearful of the short-term employment pain it must bear by submitting to radical liberalization, but therefore plagued by a chronic "low-level infection" of elevated, irreducible unemployment caused by deep-seated uncompetitiveness. The results of this study show that the costs of not privatizing are substantial, and therefore conversely suggest that the benefits of aggressively privatizing are large. They include a growing ability to finance adequate social welfare programs, even as the economy itself produces the best form of social welfare: rapid job growth.

Appendix 1: Statistical Appendix

Change in Employment after Privatization– Some Law 203 Companies

Table 28: Change in Employment After Privatization				
<i>Ranked Percentage Employment Reduction</i>				
	Number of Employees		Change	
	Before Sale	After Sale	#	%
Alexandria Mills	1266	301	-965	-76.2%
Telemisr	2810	887	-1923	-68.4%
Assiut Cement	3215	1143	-2072	-64.4%
Amereya Cement	1853	744	-1109	-59.8%
Abu Simbel and Tiba for Agencies	406	176	-230	-56.7%
Rashid Mills	1084	475	-609	-56.2%
Egyptian for Supplies	1058	522	-536	-50.7%
Memphis for Agencies	407	204	-203	-49.9%
Dakahleya Mills	945	482	-463	-49.0%
Damietta and Belkas Mills	977	521	-456	-46.7%
El Sharkeya Mills	1316	744	-572	-43.5%
Amoun for Agencies	306	189	-117	-38.2%
Torah Cement	3730	2318	-1412	-37.9%
Helwan Cement	4350	2745	-1605	-36.9%
MICAR	894	594	-300	-33.6%
Kafr El Sheikh Mills	918	618	-300	-32.7%
Nile Matches	2418	1652	-766	-31.7%
The Arab and United Stevedoring	4934	3555	-1379	-27.9%
Alexandria Flour Mills	4336	3193	-1143	-26.4%
Inland Transportation	1447	1067	-380	-26.3%
Bisco Misr	3838	2850	-988	-25.7%
Commodities Transportation	1460	1123	-337	-23.1%
Starch and Glucose	1868	1560	-308	-16.5%
Upper Egypt Flour Mills	6849	5759	-1090	-15.9%
Kafr EL Zayat Insecticides	677	575	-102	-15.1%
Transportation Work	1536	1311	-225	-14.6%
SIMO	945	832	-113	-12.0%
Extracted Oils	3514	3100	-414	-11.8%
Direct Transportation	1727	1571	-156	-9.0%
Beni Suef Cement	708	645	-63	-8.9%
East Delta Flour Mills	5249	4788	-461	-8.8%
Cairo Oils	1298	1197	-101	-7.8%
Financial and Industrial	3025	2808	-217	-7.2%
Alexandria Portland Cement	1500	1420	-80	-5.3%
Egyptian Co. for Maritime Transportation	607	575	-32	-5.3%
Middle and West Delta Flour Mills	6213	5932	-281	-4.5%
Heavy Transportation	1354	1311	-43	-3.2%
Delta Bricks	511	496	-15	-2.9%
Misr Oils	3844	3767	-77	-2.0%

Table 28: Change in Employment After Privatization				
<i>Ranked Percentage Employment Reduction</i>				
	Number of Employees		Change	
Company Name	Before Sale	After Sale	#	%
Gharbeya Mills	605	605	0	0.0%
Plastic and Electrical Industries	1450	1477	27	1.9%
Paints and Chemical Industries - PACHIN	1028	1088	60	5.8%
Egyptian Telephone Equipment	939	1128	189	20.1%
El Suez Stevedoring	1074	1359	285	26.5%
Total for 44 companies	90489	69407	-21082	-23.3%

Source: PEO

Summary Results of Microeconomic Analysis of Law 203 Companies

Table 29: Summary Results: Law 203 Companies Cost of Not Privatizing

Sector	#	Operating Revenue 2001/02	Revenue growth since 1998 (%)	Projected Revenue without pvtzation (PV)	Net Income (After Tax, Before Interest) /Rev (4-yr avg)	Future Net Income (After Tax, Before Interest) Present Value	- Debt	+ Cash	A Value (+) Burden (-) to HC Sellers	B Value of HC operations	C PV of income without privatization	D Value of (+) Burden (-) of sector to GOE A+B+C	E Privatization Proceeds	F Concessions & HC debt repaid	G Income taxes after privatization	Cost of Not Privatizing E+F+G-D
Retail																
Loss-making	7	1529	-1.0%	9677	-3.1%	-300	-537	21	-816	-455	27	-1244	126	-661	88	796
Profitmaking	5	1350	2.2%	10714	3.1%	332	-162	30	200	-35	27	192	284	64	77	233
Subtotal	12	2879	0.4%	20392	-0.2%	32	-699	51	-616	-490	54	-1052	410	-597	165	1030
Spinning and Weaving																
Loss-making	27	1739	-13.6%	6123	-27.6%	-1690	-7548	116	-9122	-683	0	-9805	296	-4816	150	5435
Profitmaking	2	203	-11.9%	760	11.7%	89	-79	206	216	-72	0	144	252	9	18	135
Subtotal	29	1942	-13.3%	6884	-24.1%	-1601	-7627	322	-8906	-755	0	-9661	548	-4807	168	5570
Cotton Ginning Trade																
Profitmaking	10	1765	0.0%	11926	38.30%	4568	-3681	123	1010	-244	68	833	2522	-173	919	2435
Subtotal	10			11926		4568			1010			833				2435
Manufacturing, other																
Loss-making	20	1119	-20.8%	3143	-2.50%	-79	-2524	349	-2254	-1047	0	-3301	433	-1527	70	2277
Profitmaking	10	722	-5.3%	3592	8.00%	287	-389	122	20	-624	27	-577	190	-23	45	789
Subtotal	30	1841	-16.1%	6735	0.80%	209	-2913	471	-2233	-1671	27	-3877	623	-1550	116	3066
Mining & Metals																
Loss-making	5	397	-12.2%	1470	-9.70%	-143	-869	160	-852	-313	0	-1165	202	-408	35	993
Profitmaking	9	4132	-4.4%	21521	17.30%	3723	-6729	1009	-1997	-609	0	-2606	1873	-259	360	4579
Subtotal	14	4529	-5.2%	22991	14.30%	3580	-7598	1169	-2849	-922	0	-3771	2074	-667	394	5572
Construction & Development																
Profitmaking	24	3832	-6.5%	17991	14.50%	2609	-1467	407	1549	-1252	770	1067	2841	0	886	2660

EGYPT: THE COSTS OF NOT PRIVATIZING

Table 29: Summary Results: Law 203 Companies Cost of Not Privatizing

Sector	#	Operating Revenue 2001/02	Revenue growth since 1998 (%)	Projected Revenue without pvtzation (PV)	Net Income (After Tax, Before Interest) /Rev (4-yr avg)	Future Net Income (After Tax, Before Interest) Present Value	- Debt	+ Cash	A Value (+)/ Burden (-) to HC Sellers	B Value of HC operations (PV)	C PV of income taxes, without privatization	D Value (+)/ Burden (-) of sector to GOE A+B+C	E Privatization Proceeds	F Concessions & HC debt repaid	G Income taxes after privatization	Cost of Not Privatizing E+F+G-D
Subtotal	24			17991		2609			1549			1067				2660
Transportation & Foreign Trade																
Loss-making	4	687	-11.7%	2592	-9.20%	-239	-479	214	-504	-64	0	-568	279	68	102	1017
Profitmaking	11	1137	-1.6%	6933	25.20%	1747	-57	608	2298	-60	433	2671	2872	187	883	1270
Subtotal	15	1824	-6.0%	9525	12.20%	1509	-536	822	1795	-124	433	2104	3151	255	986	2288
Tourism & Entertainment																
Profitmaking	5	537	3.6%	3628	44.20% ⁷⁹	1604	-108	138	1634	153	68	1854	1645	232	76	98
Subtotal	5			3628		1604			1634			1854				98
Food																
Loss-making	2	52	-12.6%	190	-4.60%	-9	-60	3	-66	-264	0	-330	9	-223	5	121
Profitmaking	15	6048	-10.4%	24000	7.00%	1680	-1691	131	120	-1976	47	-1809	1587	-1531	608	2473
Subtotal	17	6100	-10.4%	24190	6.80%	1671	-1751	134	54	-2240	47	-2138	1596	-1754	614	2593
Pharmaceutical																
Profitmaking	11	3567	2.7%	29479	11.00%	3243	-435	161	1781	-51	865	2895	1946	22	1081	454
Subtotal	11			29479		3243			1781!			2595				454
Chemicals																
Profitmaking	6	746	-6.3%	3536	11.20%	396	-604	320	112	-303	61	-130	347	-132	245	591
Subtotal	6			3536		396			112							
Tobacco monopoly																
Profitmaking	1	2673	6.0%	30375	12.20%	3706	-72	161	2542	-51	689	3181	2542	-3	689	48
Subtotal	1			30375		3706			2542			3181				48

⁷⁹ Tourism and Entertainment revenue and net income include the results of a major hotel holding company whose revenues reflect profits after hotel operating costs.

EGYPT: THE COSTS OF NOT PRIVATIZING

Table 29: **Summary Results: Law 203 Companies Cost of Not Privatizing**

Sector	#	Operating Revenue 2001/02	Revenue growth since 1998 (%)	Projected Revenue without pvtzation (PV)	Net Income (After Tax, Before Interest) /Rev (4-yr avg)	Future Net Income (After Tax, Before Interest) Present Value	- Debt	+ Cash	A	B	C	D	E	F	G	Cost of Not Privatizing E+F+G-D
									Value (+)/ Burden (-) to HC Sellers	Value of HC operations (PV)	PV of income taxes, without privatization	Value of (+)/ Burden (-) of sector to GOE A+B+C	Privatization Proceeds	Concessions & HC debt repaid	Income taxes after privatization	
Total Loss-making	65	5523		23196		-2458	-12017	863	-13612	-2826	27	-16411	1346	-7568	450	10640
Total Profit-making	109	26712		164455		23983	-15474	3416	9485	-5124	3055	7416	19610	-1607	6444	17031
Grand Total	174	32235	-7.7%	187651	9.1%	21525	-27491	4279	-4127	-7950	3082	-8995	20956	-9175	6894	27671

Table 30: Economic Authorities Financial Budget, 2003/2004							
LE millions							
#	Authority Name	Subsidies	Wages	Surplus Deficit *	General Treasury**	Capital Investment***	NIB Share
Authorities with Operating Surpluses:							
1	Egyptian General Petroleum Authority	0.0	100.1	4,868.6	0.0	83.2	
2	Suez Canal Authority	0.0	524.0	5080.0	0.0	1.0	1.0
3	New Urban Communities Authority	0.0	147.0	321.0	0.0	667.3	667.3
4	General Authority for Amireyah Print House	0.0	56.0	86.0	0.0	0.0	
5	Principle Bank for Development and Agriculture Credit (PBDAC)	2.0	66.0	6.0	0.0	221.7	
6	The General Authority for Alexandria Port	0.0	45.0	20.0	0.0	33.0	33.0
7	National Body for Telecom Administration	11.5	10.0	122.0	0.0	0.0	0.0
8	General Authority for Alexandria Water Utility	0.0	63.0	10.2	12.8	98.1	98.1
9	General Authority for Nasser Social Bank	0.0	23.5	168.0	0.0	0.0	0.0
10	Egyptian General Area Authority	0.0	71.0	2.0	0.0	9.8	9.8
11	Damietta Port Authority	0.0	8.4	13.0	0.0	6.8	6.8
12	General Authority for Tourism Development	0.0	5.3	25.8	0.0	6.6	6.6
13	General Authority for Arbitrage & Cotton Test	0.0	28.1	8.7	0.0	1.3	1.3
14	General Authority for Exhibition Affairs and International Markets	0.0	13.0	7.5	0.0	0.0	0.0
15	General Authority for Inland Ports	0.0	4.2	1.7	3.3	8.2	8.2
16	General Authority for Housing and Building Cooperatives	242.5	14.2	3.2	0.0	145.8	0.8
17	Egyptian Agriculture Authority	0.0	1.8	3.6	0.0	0.3	0.3
18	Egyptian Insurance Supervisory Authority	0.0	9.9	6.0	0.0	0.0	0.0
	Subtotal	256.0	1190.5	10,792.7	16.1	1282.9	833.0
Authorities with Retained Operating Surpluses:							
19	National Authority for Mail Service	0.0	460.0	32.0	0.0	0.0	0.0
20	General Authority for Health Insurance	220.0	560.0	195.0	0.0	0.0	0.0
21	Authority for Rural Electricity	0.0	140.0	16.5	0.0	504.3	503.8
22	General Services Body at the Ministry of Defense	0.0	10.0	9.2	0.0	0.0	0.0
23	The General Authority for Development and Agriculture Development Projects	0.0	21.2	1.5	0.0	251.0	251.0
24	General Authority for Investment & Free Zone	0.0	53.0	38.2	0.0	0.0	0.0
25	Fund for the Ministry of Internal Affairs Lands' Projects	0.0	1.9	15.7	0.0	5.0	
26	Fund Financing Housing Built by the New Urban Communities Ministry	0.0	1.3	22.2	0.0	10.0	
27	National Authority for Military Production	0.0	7.5	20.5	0.0	0.0	0.0
28	Fund for Prisons Manufacturing and Production	0.0	1.2	11.7	0.0	0.0	0.0
29	Government Insurance Fund for Imprests' Holders	0.0	0.0	15.8	0.0	0.0	0.0
30	The Egyptian Electric Utility Organization and Consumer Protection Agency	0.0	3.0	0.0	0.0	0.0	0.0
	Subtotal	220.0	1259.1	378.2	0.0	770.3	754.8
Authorities with Operating Break-Even							

Table 30: Economic Authorities Financial Budget, 2003/2004							
LE millions							
#	Authority Name	Subsidies	Wages	Surplus Deficit *	General Treasury**	Capital Investment ***	NIB Share
31	National Social Insurance Authority	9365.0	313.5	0.0	0.0	0.0	0.0
32	General Food Supply Authority	3090.8	10.8	0.0	0.0	120.3	60.3
33	Egyptian Awkaf Authority	0.0	20.5	0.0	0.0	0.0	0.0
34	The Authority for Developing and Using New and Renovated Power	0.0	10.0	0.0	7.2	278.2	78.2
35	The General Authority for Executing Industrial and Metallurgical Projects	0.0	21.0	0.0	0.0	2.4	2.4
36	General Authority for Industry	0.0	16.1	0.0	0.0	0.0	0.0
37	Alexandria Treatment Institution	3.2	0.7	0.0	0.0	0.2	0.2
38	Cairo Treatment Institution	5.6	1.5	0.0	0.0	5.9	5.9
39	Kalyoubeyya Treatment Institution	0.2	0.1	0.0	0.0	0.4	0.4
40	The Authority for Executing Water Plants Projects for Generating Electricity	0.0	10.4	0.0	7.7	28.1	28.1
41	The Authority for Nuclear Generating Electricity Plant	0.0	8.4	0.0	7.7	1.8	1.8
42	Trade Information Center	0.0	1.7	0.0	0.0	2.0	2.0
	Subtotal	12464.8	414.7	0.0	22.6	439.2	179.2
Authorities with Operating Deficits							
43	National Authority for Radio and Television Union	0.0	371.0	-688.0	0.0	132.5	132.5
44	National Authority for Egyptian Railways	0.0	593.0	-1584.1	1746.8	806.5	591.5
45	Cairo General Transportation Authority	240.0	297.5	-162.0	170.6	147.9	147.9
46	General Authority for Greater Cairo Water Utility	0.0	154.0	-377.9	115.3	178.0	174.0
47	The General Authority for Red Sea Ports	0.0	11.0	-29.5	11.2	33.4	
48	General Authority for Greater Cairo Sewage	0.0	124.0	-315.0	116.0	1147.5	1147.5
49	Alexandria General Transportation Authority	80.0	79.0	-49.0	40.1	56.1	56.1
50	General Authority for El Gharbeyya Sewage & Potable Water Utility	0.0	53.5	-12.9	8.2	1.5	1.5
51	General Authority for El Dakahleyya Sewage & Potable Water Utility	0.0	54.0	-7.5	4.5	1.7	1.7
52	General Authority for Alexandria Sewage	0.0	49.5	-155.0	64.8	146.5	86.5
53	General Authority for El Sharkeyya Sewage & Potable Water Utility	0.0	38.8	-5.6	3.1	0.5	0.5
54	The General Authority for Port Said Port	0.0	11.0	-188.5	5.6	89.8	89.8
55	General Authority for El Fayoum Sewage & Potable Water Utility	0.0	19.0	-18.0	6.6	0.1	0.1
56	General Authority for Menia Sewage & Potable Water Utility	0.0	22.7	-8.0	6.6	0.1	0.1
57	General Authority for Beni Suef Sewage & Potable Water Utility	0.0	18.5	-5.0	0.8	0.1	0.1
58	General Authority for Conferences Centers	0.0	7.4	-8.4	0.0	0.0	0.0
59	General Authority for Aswan Sewage & Potable Water Utility	0.0	24.0	-8.0	7.9	0.5	0.5
60	General Authority for the Economic Zone of the North West of the Gulf of Suez	0.0	0.0	-1.0	1.0	0.0	0.0
	Subtotal	320.0	1556.9	-2935.3	2308.1	2611.2	2297.8

Table 30: Economic Authorities Financial Budget, 2003/2004							
LE millions							
#	Authority Name	Subsidies	Wages	Surplus Deficit *	/General Treasury**	Capital Investment ***	NIB Share
	TOTAL	13260.8	4421.1	8235.6	2346.8	5103.7	4064.9

* Surplus or deficit is after subsidies, which are included in revenues.
surplus or total operating burden on the GOE.

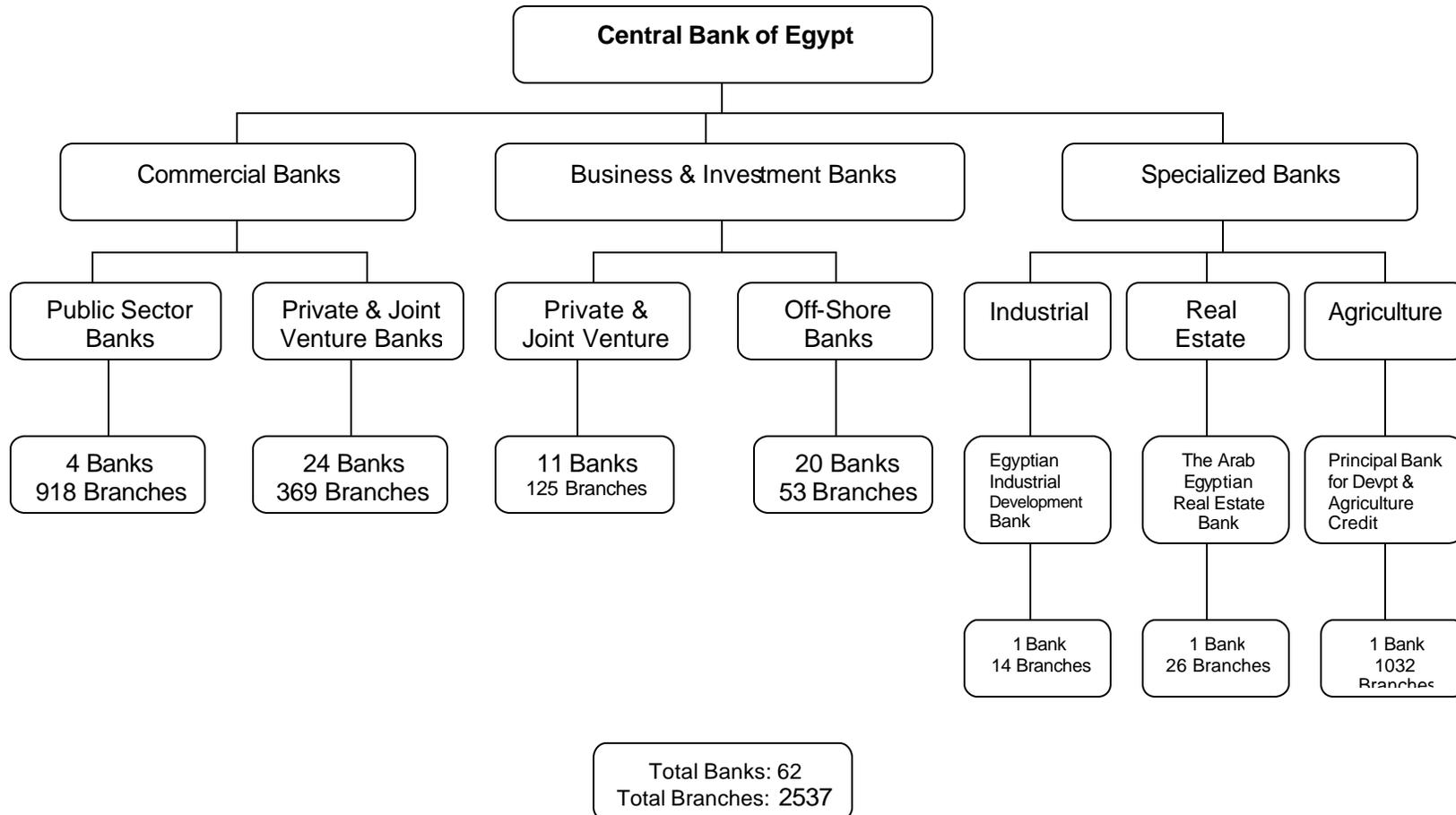
** Partially finances debt repayment and operating deficit.

*** Represents new credit facilities to finance capital expenditures.

Source: *Official Gazette* , June 19, 2003, Annexes B, C, D.

Appendix 2: Structure of Banking System

Figure 9: Structure of Egyptian Banking System



Appendix 3: Textile Sectors Case Study

Costs of Not Privatizing and Sensitivity Analyses:

1) Spinning, Weaving, Dyeing sector

2) Cotton ginning sector

We have estimated the “costs of not privatizing” the above two sectors as a guide to setting privatization priorities.

The Approach

The model:

1. We start with an assessment of the present value of the sector, assuming it is not privatized. Some sectors have a negative value in their current state.
2. We add the direct opportunity costs of not privatizing to the Government of Egypt (GOE). This primarily means adding foregone income taxes and foregone privatization proceeds, net of any concessions that may be necessary to sell the firms and net of the settlement of holding company debt obligations.

We estimate the costs of not privatizing in steps that show a) the value to the holding company sellers (whose interests are not identical with those of the Government) without privatization, b) the value to the GOE, and c) the opportunity costs of not privatizing.

The calculation is as follows:

- + Present value of sector's future earnings before interest assuming no privatization
- Debt on balance sheet (not including debt to holding company or affiliated companies)
- + Cash on balance sheet
- = Value of sector to sellers** (the respective holding companies)
- Present value of holding company costs and holding company debt attributable to the sector
- + Present value of future estimated taxes without privatization
- = Value of sector to Government of Egypt (GOE)**

Following are the opportunity costs of not privatizing:

- + Additional taxes that would be collected (tax opportunity cost) after privatization
- Estimated debt and labor concessions, if any, needed to effect privatization
- + Estimated privatization proceeds
- = Cost of Not Privatizing to GOE (present value)**

The model addresses the direct effects of privatization on the Government and Government-owned holding companies. It does not attempt to project benefits to the rest of the economy.

Key assumptions

The following base assumptions can be subjected to *sensitivity analyses*:

- Revenues are projected on the assumption that the arithmetic mean of real growth rates for the sector for 1997/98 – 2001/02 will continue in the future.
- Net income, in the absence of privatization, is projected on the basis of net income as a percentage of revenues for the sector during the past four years.
- Inflation rate, 1997/98 to 2001/02 (*Economist Intelligence Unit*) 3.2%
- Capitalization rate (weighted average cost of capital):

Nominal capitalization rate	18%
- Less projected inflation rate (<i>Economist Intelligence Unit</i> , February 2003, 2004 - 2007 forecast average)	3.2%
= Real capitalization rate	14.2%
- Average tax rate on future income	20%
- Privatization proceeds as percent of value to buyers of loss- making sector firms	30%
- Privatization proceeds as percent of added value of firms in s ector (profitable sub-sectors). This assumes a higher level of competition among prospective investors.	60%
- Concessions (primarily debt and labor), if any, as percent of negative value of loss-making firms to consummate privatizations, based on cases studies.	50%
- For the purpose of estimating the opportunity cost of taxation with privatization, a real growth rate in revenue is assumed equal to the real projected real growth rate of the Egyptian economy for 2004 to 2007 (<i>Economist Intelligence Unit</i>).	4.2%
- Net income to revenue after privatization assumed according to recent experience of private companies in the sector (<i>Business Week</i> industry date, 2001 and 2002; estimates for Egypt).	3.7%
- Distinctly anomalous data are ignored as either erroneous or resulting from special conditions inconsistent with long term trends. For example, if past revenues dropped by 50% for two years and then recover to near the original level, the two low years are disregarded.	

Results for Spinning, Weaving, and Dyeing sector

29 companies are included in the sector, 27 from the Textile Holding Company and two – Tanta Flax and Dyestuffs – from the Chemicals Holding Company. 27 of the companies are habitually loss-making, two are usually profitable.

Value of sector to (GOE) without privatization	-9.7 billion
x (-1) = Cost of sector to GOE without privatization	9.7 billion
Privatization proceeds	0.5 billion
Less, debt and labor concessions to privatize	-4.8 billion
Income taxes after privatization	0.2 billion
= Cost of Not Privatizing	5.6 billion

Sensitivity analyses:

<u>variable</u>	<u>test value</u>	<u>CNP⁸⁰</u>	<u>%change</u> <u>%change CNP</u>
a. Capitalization rate	15%	5.8	+4.4%
b. Projected inflation rate	6%	5.8	+4.1%
c. Projected real growth	2%	5.5	-1.2%
d. Average tax rate, future income	30%	5.7	+2.2%
e. Privatization proceeds, losing firms	10%	5.3	-2.2%
f. Concessions, % value losing firms	75%	3.3	- 40.4%
g. Combining b and c, above		5.7	+2.0%

The results are relatively insensitive to changes in the key variables, with the notable exception of the assumption on concessions required for sale. This assumption is addressed in the next paragraph.

Comments:

It may seem curious that the Cost of Not Privatizing is greater than the Value to the GOE without privatization. This is because the vast majority of companies in the sector are loss making and a) are encumbered with excess debt that to banks that cannot be repaid and b) have excess employees. In this case, the model shows LE 4.5 billion of concessions as necessary to effect privatizations, which is substantially larger than the projected payments for existing shares. If we assume all concessions are in the form of debt reduction, this still leaves 3.1 billion of debt that would remain with the privatized companies. If the companies remain under state control, almost none of the LE 7.6 billion of total debt would be repaid, given that the sector is both unprofitable and rapidly shrinking. Privatization, therefore, offers the only hope for servicing some of the debt. Still, a substantial amount of debt will not be repaid under any circumstance. *Note: only external debt is included in this analysis, including bank debt at the holding company level. Debt to the holding company is in addition, and almost all in the loss-making companies is uncollectible. Intra-group debt is disregarded, as in an accounting consolidation.*

Were the sector in a steady state rather than shrinking, the negative value would be much higher --- losses would continue at current levels, implying a *negative value on the order of LE 15 billion*. Shrinking revenues are consistent not only with experience in recent years but also with the observations in the industry that, if not privatized, these companies will die slowly. Without privatization there is little potential to renew the outmoded fixed assets, a necessary condition for revival.

Moreover, the elimination of textile quotas worldwide from January 1, 2005, presents Egypt simultaneously with a threat and an opportunity. If the spinning and weaving industry is revitalized with new capital investment, Egypt can profit from its natural advantages and grow its international market share. But if the industry is not revitalized, Egypt's potential will be relinquished to China, Pakistan, India, and other countries.

Our analyses of some specific distressed companies in the sector supports the view that these companies can be turned around if sold to investors willing and able to invest the required capital. Those analyses indicate a growth potential much higher after privatization than we have assumed in the current analysis, although it is reasonable to expect that some other companies will continue to decline despite privatization.

It is appropriate to compare, for perspective, the present values in this analysis with short-term flows, such as the projected GOE budget deficit, projected at LE 42 billion for the current fiscal year.

⁸⁰ Cost of Not Privatizing, billion of LE

Results for Cotton Ginning and Trading Sector

Ten companies are in the sector, all profitable and all in the Textile Holding Company.

Value of sector to (GOE) without privatization	0.8 billion
x (-1) = Cost of sector to GOE without privatization	-0.8 billion
Privatization proceeds	2.5 billion
Less, debt and labor concessions to privatize	-0.2 billion
Income taxes after privatization	0.9 billion
= Cost on Not Privatizing	2.4 billion

Sensitivity analyses:

<u>variable</u>	<u>test value</u>	CNP ⁸¹	<u>% change</u>
a. Capitalization rate	15%	3.5	+72%
b. Projected inflation rate	6%	3.3	+65%
c. Projected real growth after privatization	2.8%	1.2	- 40%
d. Combining b and c, above		1.9	- 5%
e. Tax on incremental income	20%	1.6	- 20%
f. Privatization proceeds, % added value profit firms	80%	2.4	+18%

For this sector, the results are more sensitive to the key assume assumptions. Nevertheless, even with significant changes in the variables, the cost of not privatizing can still shows a range between LE1.2 billion and LE 3.5 billion.

⁸¹ Cost of Not Privatizing, billion of LE

Appendix 4: Technical Description of Macro Models

Two simple macroeconomic models were developed for this study, one for the backward-looking simulation based on a cross-country comparison (Section 6.4), and one for the forward-looking projection under alternative privatization policies based on Egypt's own past experience (Section 6.5).

1. Cross-Country Simulation

The purpose of this exercise was to estimate macroeconomic costs to Egypt over the past decade by comparing its macroeconomic performance to that of other developing and transition economies. This comparison is captured in Figure 3 in text Section 6.4.

The simulation model is based on the broadest measure of general economic improvement, the growth of GDP per capita. It compares Egypt, a gradualistic privatizer, to Poland, a rapid privatizer. The model hypothesizes that had Egypt adopted an aggressive privatization / liberalization strategy, it would have made up part or all of the difference between its growth in GDP / capita and that of Poland.

In the Base Case scenario, we assume that Egypt makes up 50% of the difference between its GDP/capita growth rate and that of Poland:

<u>Assumptions</u>	
Actual Poland GDP/cap growth, 1992-2002	73%
Actual Egypt GDP/cap growth, 1992-2002	45%
<i>Difference</i>	27%
Assumed Egypt Difference Makeup – 50%	14%
Resulting Egypt Potential GDP/cap growth	59%
Actual Productivity Growth	37%
Assumed Productivity Growth	45%

- In this scenario Egypt's GDP/capita (in US\$) grows 59% instead of 45%, versus Poland's growth of 73%.
- Given population and exchange rates, this is translated into a potential level of GDP in local currency.
- The assumed rate of productivity growth yields an end-period level of GDP / employee
- Given the GDP level, this translates into an employment level. Note that the simulation assumes that under faster liberalization, productivity would have grown faster than it actually did. I.e., the model is conservative with respect to employment growth.

The following table presents the model results together with actual performance.

	<u>1992</u>	<u>2002</u>	<u>Change</u>	<u>%Chg</u>
GDP/Cap – actual US\$	2550	3701	1151	45%
GDP/Cap – potential US\$	2550	4052	1502	59%
Population <i>millions</i>	54.8	66.4		
PPP GDP – actual LE millions	139.7	245.6	106.0	76%
PPP GDP – potential LE millions	139.7	268.9	129.2	93%
Employment – actual <i>millions</i>	15.7	20.0	4.4	28%
Labor force – actual <i>millions</i>	16.9	22.1	5.2	
Unemployment <i>millions</i>	1.2	2.1	0.9	

Unemployment rate – actual	7.2%	9.4%	2.2%	
GDP/Employee – actual <i>LE</i>	8920	12263	3344	37%
GDP/Employee – potential <i>LE</i>	8920	12938	4018	45%
Employment – potential <i>millions</i>	15.7	20.8	5.1	33%
Unemployment – potential <i>millions</i>	1.2	1.3	0.1	9%
Unemployment rate – potential	7.2%	6.0%	-1.2%	
Real GDP – actual <i>LE billions</i>	139.1	214.7	75.6	54%
GDP deflator – actual				22%
Real GDP – potential <i>LE billions</i>	139.1	237.8	98.7	71%

These results are summarized in the following table, showing Egypt's simulated gains under an aggressive privatization / liberalization policy. These results are reported in Table 25 in the text.

<u>Base Case Scenario:</u>			
<u>Costs (foregone gains)</u>	<u>Actual</u>	<u>Potential</u>	<u>Gain</u>
Real GDP	214.7	237.8	11%
Annual real GDP growth	4.4%	5.5%	24%
GDP/capita	3701	4052	9.5%
Employment growth	4.4	5.1	17%
Employment #	20.0	20.8	0.8
Unemployment rate	9.4%	6.0%	-36%

The model can also be run for a “best case” scenario, in which Egypt's GDP/capita grows fully as fast as Poland's. Gains are as follows in this case:

<u>Best Case Scenario:</u>			
<u>Costs (foregone gains)</u>	<u>Actual</u>	<u>Potential</u>	<u>Gain</u>
Real GDP	214.7	261.0	22%
Annual real GDP growth	4.4%	6.5%	46%
GDP/capita	3701	4402	18.9%
Employment growth	4.4	5.4	24%
Employment #	20.0	21.1	1.1
Unemployment rate	9.4%	4.7%	-51%

For the prospective gain in foreign direct investment, we simply assume that Egypt, if it privatized aggressively, would have obtained 1/3 the amount of FDI / worker that Poland did over the decade under review:

Table 32: Prospective Gain in Foreign Direct Investment			
Data for 1991-2002	Egypt		
	Poland	Actual	Potential
Average Annual FDI US\$ billions	4320	890	
Average Annual FDI / worker US\$	2602	412	859
Total FDI, 1991-2002 US\$ billions	51.8	10.7	22.2

The potential FDI / worker level of \$859, one-third of Poland's \$2602, is about the same level as that of Romania over this period. Romania is another gradualistic reformer.

2. Projections for Alternative Privatization Policies

In Section 6.5 we presented the results of a model used to project macroeconomic results under alternative privatization policies. The model posited the following chain of causality:

$$FDI = f_1(PP)$$

$$GFI = f_2(FDI, PP)$$

$$GDP = f_3(GFI)$$

Where PP stands for privatization proceeds, GFI for gross fixed investment, and $f_n()$ are functions to be specified. We can also posit an employment function:

$$N = f_4(GDP, Productivity)$$

Model coefficients were derived from examining historical correlations during the period of relatively active privatization from 1996-2000, in contrast with the period of much slower privatization activity from 2001-03. The following correlations were observed for those periods.

	1996-2000	2001-2003
Privatization Proceeds LE billions / yr	2.71	0.42
FDI / Privatization Proceeds ratio	1.24	7.94
GFI Annual growth	18.1%	1.6%
GDP / Employee (Productivity) Annual growth	8.2%	4.5%

Assumed alternative paths of privatization proceeds were constructed for the projections. In the slow privatization case, proceeds averaged LE 1 billion or less annually over 2004-08, as in the recent historical period. In the rapid privatization case, proceeds were assumed to average almost LE 5 billion annually. These assumed privatization proceeds produced the projected time series for FDI according to the above coefficients. GFI was assumed to grow over the projection period at 18.1% per annum in the rapid privatization scenario, as it did over 1996-2000, and to maintain the 1.6% growth rate of the recent period under the slow privatization scenario.

Nominal GDP was calculated as a function of GFI, according to the following formula:

$$\text{Nominal GDP growth} = 4.7\% + .5 * \text{GFI growth}$$

The intercept, 4.7%, is the minimum growth rate of nominal GDP over 1994-2003 decade, and the 0.5 coefficient is the trend ratio of nominal GDP growth to GFI growth over that period.

Finally, employment is calculated as a function of (1) the level of nominal GDP and (2) projected GDP per employee, or productivity. We assumed that under slow privatization, productivity would grow at 4.0 percent per year over the forecast period, from LE 22,200 per employee to LE 27,000. Under the rapid privatization case, because it is assumed that competitiveness in general would rise more rapidly, we assume an increase in productivity of 10.0 percent per year, so that GDP per employee rises to LE 35,800 by 2008. This biases the analysis against employment growth in the rapid

privatization case, but nevertheless substantially greater overall employment growth is projected, because of the much more rapid growth in GDP.

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