## Privatization; A Means, Not an End?

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## Introduction

Privatization 1/ has been a major feature of many industrialized and developing economies during the 1080's and 1990's. A recent unpublished paper (Megginson and Netter 2000 (unpublished) indicates the financial magnitude of privatization on a global scale, and the impact this has had in changing the proportion of GDP contributed by State Owned Enterprizes (SOEs) in industrial, and developing countries. It also extensively reviews empirical studies of the effects of privatization, concluding that, on the whole, these are economically beneficial. This view is not universally shared (Pollitt in Matsuhuri Kagamii and Matasugu Tsuji 2000).

This paper sets out to do three things. First, it briefly reviews the economic rationale for privatization. This is important insofar as the economic characteristics of various industries differ and these differences contribute significantly to the "success" or "failure" of privatization. In this, the analysis of Vickers and Yarrow (1989) is extensively drawn upon.

Secondly, the findings of Megginson et al and Pollitt et al are reviewed and compared. Observations are offered based upon experience of the author in attempting to objectively compare the performances of SOEs and privatized firms.

Finally, the experiences of two countries in which privatization has been significant - the UK and Argentina - are compared and contrasted. Although the UK is classed as an industrialized country and Argentina as middle-income developing, the latter was comparatively much richer several decades ago than today, and had a strongly established industrial base well before most Latin American countries. In other words, the institutional framework to take advantage of privatization should have been largely established there.

#### A. The Theoretical Framework

Ever since the late Joan Robinson wrote her seminal work "The Economics of Imperfect Competition" in the 1930s, the concept that private companies automatically produce goods or services in the volumes or at the prices which ensure maximum benefit to society (welfare), has been treated with scepticism by all but a small group of economists. Indeed, it is probably true to say that the belief in many countries after the Second World War, that the state, rather than private companies, should control the "Commanding Heights" (CH) of the economy, was indirectly a result of the belief that such industries (eg telecommunications, electricity

generation...) benefitted from economies of scale, and as a result, were unlikely to accord with the welfare maximization model.

However, after several decades of experience with the CH approach, the belief arose that the operation of State Owned Enterprizes (SOEs) might not be welfare maximizing either - the objectives of politicians who supervised SOEs and the managers/employees who operated them might be at variance with welfare maximization; ie there is a "political" component in decision-making. When this conviction was translated into political power to alter the economic landscape, the pendulum swung back to sharply reducing the role of the state. This was particularly true in the UK after Mrs. Thatcher came to power as British Prime minister in 1979!

The possible deviations of both private and state run enterprizes from welfare maximization can be expressed mathematically:

If V is the weighted average of welfare (W) and political (P) objectives, then:

1) 
$$V = W(x) + uP(x)$$

where x is a vector of decision variables and u reflects the weight given to the P agenda relative to the W. It derives from the principal/agent relationship between voters and politicians; u will be smaller the better the functioning of the political system is attuned to maximize welfare.

Similarly, under private ownership, if shareholder benefit (S) is the objective, but there exist externalities (E) (due to economies of scale, and other market imperfections) then:

2) 
$$S(x) = W(x) - E(x)$$

The relative magnitude of the distortions P and E will be a major determinant of the desirability of privatization.

This, of course, is a very simple model. It is appropriate at this juncture to consider, again in a simplified form, the general situations to which the model is applied:

- a) a SOE operating in a competitive market with few market failures
- b) a SOE with substantial market power
- c) contracting out of a service previously undertaken by a public sector organization.

Examples might be, respectively, trucking services, local water supply and garbage collection. In these, E is likely to be small for trucking services, potentially large in monopoly water supply and not of relevance in garbage collection, where the necessity to ensure a minimum service level and the loss of welfare from the non-consumption of the service make it unsuitable for service availability to be determined purely by market forces. market soci service contracts will not be considered further.

In determining whether an industry is appropriate for privatization, a further factor needs to be considered. What is the appropriate role and practical scope for regulation? Suppose, for example, we are considering an industry under category b) above, in which the technical efficiency gains from privatization (technical used in the sense of total factor productivity, taking into consideration the ability to arrange investment financing) are expected to be large, but the scope for exploitation of monopoly power is also great. It may be that a regulatory mechanism can be introduced, the "cost" R(x) of which is less than the efficiency gains. Again, in terms of the model:

3) uP(x) greater than E(x) + R(x)

It is appropriate at this stage to briefly mention the main factors that will determine the "cost" of regulation (which, in fact, can be positive or negative, hence the use of inverted commas).

First, a balance has to be struck between the needs of the regulator for information and the need of management for minimum interference in day to day operations of the business. This may be best achieved by establishment of a <u>limited</u> number of parameters which can give incentives to management to operate in a manner which maximizes W, together with specific controls on managerial behaviour. This is explored further in Section B.

Secondly - and this cannot be overemphasized - any regulatory mechanism needs to be seen as fair and unambiguous and, thus, have political acceptability which will survive a change of government, and have the force of law. Clearly, within that framework, the regulators need to be seen as unbiassed. These requirements are by no means easy to achieve.

Thirdly, once the framework under which the privatized company is to operate is established, it should not be subject to arbitrary change. For example, if a SOE railway is privatized, it would be inappropriate to reduce tolls on a parallel, competing highway shortly after the privatization contract is signed, unless a mutually acceptable mechanism is in place for review of privatization conditions!

Fourthly, in determining the conditions of privatization, and thus the regulatory framework, it is important to realize that nearly all industries are dynamic in the sense that their economic circumstances can change, sometimes rapidly. Thus the state of the company, and the level of information available, when inviting bids for a company (if that is the route chosen) may be different from that when a privatization decision is made. Unless there is some - but not excessive - flexibility built into the process, discontent, or even legal challenges, can arise.

Finally, large companies are typically heirarchies in which decisions are delegated, from owners to executives, from executives to managers. The discretion available to executives and managers in reaching decisions can also affect the degree of deviation of results from the W maximization situation.

There is thus a new ingredient to feed into the model; the managerial agenda M and the models thus become:

- 4) U(x) = W(x) + uP(x) + eM(x) under public ownership and
- 5) U(x) = W(x) E(x) + dM(x) under private, where
- U(x) represents the way in which the business is actually run.

The conventional wisdom is that e is greater than d but in fact, SOE management often complains that it is given insufficient freedom from political interference! Equally, while the private, owner-managed company can be expected to perfectly internalize managerial incentives ie dM(x) = 0, that type of firm is very rarely the type that forms a SOE in the first place. The typical SOE, when privatized, will have a managerial structure in which managerial incentives, and the means to pursue them, are different to some degree from those in the SOE, but not prima facie producing results closer to the W maximization sought. If shareholders had perfect knowledge or could exert substantial unified power, they might force management to conform closely to a profit maximizing model, but that is not often the case.

### To summarize this section:

- i) both SOEs and privatized companies may pursue policies which do not maximize welfare
- ii) a monopoly may behave like a monopoly, whether as an SOE or private company. There may be a significant "deadweight" cost of regulating a private monopoly
- iii) in large organizations, managers have considerable discretion in how they run the business. This may be, but is not necessarily, greater in an SOE than in a privatized company.
- iv) what is likely to result in minimization of uP(x) or E(x) is competition!

## B From State to Market

Megginson and Netter (unpublished 2000) have reviewed an impressively large and diverse body of studies in a survey of empirical studies on privatization. They have also assembled data on the magnitude of the proceeds of such privatization, in recent years, when privatization became a global phenomonom, and the growth of stockmarket capitalization and turnover. Separating the period from 1988 to 1999 into three periods, we find that from 1988 to 1991, privatization proceeds averaged \$ 33 billion yearly, from 1992 to 1995, \$ 64 billion, and from 1996 to 1999, \$ 133 billion (Exhibit 1). To put this in context, Argentine GDP was about \$ 280 billion in 1999, that of the UK about \$ 1400 billion.

Perhaps more importantly, the share of SOEs as a percentage of GDP, declined perceptibly in all classes of economy. Although there have been some quite sharp fluctuations, the following in broadly correct:

Economic Group	SOE Share	SOE Share
-	1979	1995

Low income	15	8
Lower middle	11	6
Upper middle	8	6
Industrialized	9	6

The shares have almost certainly declined further since. What is interesting is that the sharpest decline has been in the low income group, where the decades following the Second World War ushered in state-sponsored industrialization.

The growth of stockmarket capitalization and turnover since the mid 1980s has been spectacular. World market capitalization increased 10 fold from 1983 to 1999, with most of the inceare occurring in the developed world. The ratio of turnover to capitalization has also increased, from about 1:3 to 1:1 suggesting more active markets. Given that the total capitalization is about \$ 35 trillion, the actual privatization proceeds are trivial. However, there can be little doubt that privatization has stimulated stockmarket operations in some countries where they were of minor importance in the past. Whether this is a good or bad development is still debateable!

The targets for privatization have been very similar in all major countries. Telecommunications have dominated, accounting for half of the 35 largest share offerings, and including those of such giants as Nippon Telegraph and Telephone (NTT) of Japan, and the telecommunication companies of the major European countries. Power and Energy companies were the second most important group, with banks in third place. In the UK, other activities such as British Airways, British Aerospace, British Steel, Coal and Water were also privatized.

The objectives of privatization have been generally described as falling into one or several of the following categories (some of which are conflicting):

- 1) Government revenue generation; where the SOEs have been lossmaking; this clearly has a <u>flow</u> effect on government revenues, and this has been particularly apparant in some Latin American countries, notably Argentina and Mexico. Where deficits were not being incurred, the result is much more a <u>stock</u> effect. Obviously, both can occur simultaneously.
- 2) Efficiency improvement; this arose from the belief that the private sector is inherently more efficient in the use of resources than the public. The evidence for this is discussed further below. It should be noted that all other things being equal, sale of a monopoly will raise more money than that of a company operating under competitive conditions, but the latter is more likely to promote efficiency.
- 3) Reduction in the role of government; by implication, this is consistent with 2) above
- 4) To stimulate competition; again, this is consistent with 2) but may not be a natural characteristic of some industries. The implications are discussed further below.
- 5) To subject a (former) SOE to market discipline. This is effectively an expression of the belief that a SOE will not be allowed to go bankrupt, and thus the budget constraints imposed by governments are "soft". This is also discussed further below.

6) To promote wider share ownership. Some privatizations have been structured with this deliberately in mind, and presumably there has been an increase in the number of people owning shares. It is not clear, however, what the theoretical basis is for believing this is necessarily a good thing.

The Megginson et al study cites 10 other studies, (referenced at end) which have examined a varied number and type of privatizations. Seven of these studies conclude that privatization improved company performance, mainly in terms of total factor productivity (TFP). Additionally, 15 studies specific to individual countries or sectors were also reviewed. These range from a World Bank study which attempted to determine the total welfare effects of 12 of the early privatizations, to some studies examining only one sector or company. Five of the studies focussed on telecommunications, concluding that privatization produced service improvements in access but no consistent pattern of cost reduction. The other studies, including the World Bank study, concluded that privatization had a net positive effect on welfare in the preponderance of cases.

However, a note of caution is in order. One, study, which reported spectacularly positive results from privatization was based on very limited information, which was restricted both in a temporal sense and in the comprehensiveness of data which the privatized entities were willing to provide. This is an important problem in comparing SOE and privatized company performances; the SOE is normally obliged by law to provided financial information to the body politic and through it, the public. Private companies, naturally, try to minimize the amount and type of financial information supplied, on the grounds that such exposure can affect their commercial flexibility.

In a series of papers on privatization, deregulation and efficiency (Mitsuhiro Kagami and Masatsugu Tsuji, 2000) one paper (Micheal Pollitt) describes the political and economic framework for the UK privatization program, and in analysis of the effects, reviews six studies undertaken in the 1990's. Below are briefly described the main points in Pollitt's survey, and the conclusions of the six studies.

Pollitt provides a comprehensive review of the background to privatization in the UK, which is discussed in more detail in Section C. Briefly, the UK's economic performance was poor in the 1970's and Mrs. thatcher's conservative Party was elected to govern with a mandate for change. It took some time for the program to take shape, but between 1983, when British Telcom was privatized, until the 1996 privatization of Railtrack, the railway infrastructure monopoly, a steady strem of privatizations yielding some \$ 6 to 7 billion per year occurred.

The program was dominated by privatizations of SOEs which had been seen as having natural monopoly characteristics - telecommunications, power and water supply. Thus, the question of how to ensure that the privatized companies did not exert monopoly power against the public interest (in Equation 2, increasing E at the expense of W) resulted in discussion of the best form of regulatory regieme (Littlechild (1983). The focus was on financial/price control. This has the intrinsic advantage that regardless of the product, there is a translation of costs and revenues into financial streams, and thus a reasonably uniform underlying concept of regulation can be

established. The alternatives considered were i) Rate of Return - a policy widely employed in the USA, but seen as encouraging overinvestment ii) a regieme in which profits tax rates were reduced with output, thus encouraging marginal production iii) the scheme finally adopted, designated RPI - X. This was based on the concept that most of the privatized companies were in industries with declining marginal costs and, thus, prices could be expected to decline relative to the general Retail Price Index. Thus target prices could be set, the value of X (the reduction factor) varying from one industry to another.

The rationale for and the powerful role of regulation was particularly prominent in UK privatizations. In reviewing the evolution of RPI - X, Pollitt notes that several significant issues have emerged. Briefly i) which activities should be regulated. The general principle is that if market forces can be expected to operate (ie actual or potential competition) regulation is not necessary. ii) setting the value of X. As X finances investment for expansion, its calculation and evolution is very important. iii) introduction of competition where none previously existed requires access by the newcomer (especially in telecommunications). the question is, what is a reasonable access charge and how can the previous monopolist be prevented from using other tactics to prevent entry? iv) how to regulate quality? v) how often to change X, which in turn depends on the investment horizon vi) related to v) the regulator is increasingly obliged to scrutinize the comoanies' investment plans vii) comparators are used to establish targets. There is always some difficulty in ensuring appropriate comparisons.

An important point is that viii) information disclosure has also been a problem. Management, whether of a SOE or privatized company, dislikes yielding all information and will resist regulatory attempts to extract it. It is also worth noting that an often overlooked assumption in believing that a privatized company will perform more efficiently than its SOE predecessor is that shareholders will be better able to make informed decisions. However, that depends on management releasing information to shareholders. In fact, comprehensive data on the performance of privatized companies is often difficult to obtain due to management asserting (possibly justifiably) that disclosure of some information - especially financial - is commercially sensitive.

ix) the other side of the information problem is that the regulator may prefer to be passive and not pursue information with due dilligence.

Finally, there is an issue which Pollitt does not fully explore. A number of companies have either expanded abroad, or moved into other fields. The rationale is usually synergy, geographically or industrially based. The question is whether the public interest would be better served if such investment were returned through lower prices

The six studies, conducted from 1991 to 1997 review a number of different parameters in the privatization process. These include the effects of ownership change (ie privatization) compared with that of government change, the effects of the general macroeconomic climate, the effects of the decision to privatize on a company's performance prior to actual privatization, and the effect of competition. They clearly concludes that when privatization was associated with increased

competition, the effects on welfare were positive. When they were not, privatization per se did not have a consistently beneficial effect.

Pollitt draws two general conclusions from the studies. First, management changes within the public sector prior to privatization improved productivity, but privatization itself did not do so consistently. Privatization improves profitability more than performance, and where firms are regulated, the introduction of competition was the key factor in performance improvement. Secondly, some firms have performed much better than others mainly due to externally induced competition (British Airways, Cable and Wireless).

Monopolies which retained significant monopoly power (BT, British Gas) did not perform particularly well and attempts to intoduce competition into water supply have not been a success, leading to the introduction of "yardstick" competition, complicated by the introduction of environmental requirements. The rail industry, with its original multifaceted structure (an infrastructure monopolist, a multitude of train operators under franchises, three rolling stock companies) is already showing signs of moves towards consolidation. Investment has increased, but it is notable that coordination between opertors is not a strong feature, and the level of public satisfaction is low.

In commenting on the results of these studies, it is worth reverting to Vickers and Yarrow's (1989) central proposition, that <u>neither</u> the management of an SOE nor of its private counterpart have welfare as the sole objective. The difference in the general thrust of the results of the two sets of studies might very well be mainly attributable to uP (Equation 1) being substatially greater than E (equation 2) in the Megginson et al studies, but much less so in Pollit's group, combined with the significant introduction of R (see Equation 3) deemed necessity to offset E being greater in the latter group. In other words, the British SOEs pre-privatization were not in such bad operational shape as were similar companies elsewhere. Thus the impact of privatization, in a direct sense, was less. We return to this theme in Section C below.

## The United Kingdom and Argentina

I spent some time on the theoretical framework and the different results obtained in the Megginson et al and Pollitt et al studies because I believe it is relevant to the contrasts which can be observed between the effects of the substantial privatization programs which occurred in the United Kingdom and Argentina.

A brief description of the similarities and differences in the two countries at the beginnings of their programs is in order.

First of all, the UK is and was a more industrialized, wealthier country than Argentina, and effectively started its privatization program a decade earlier. In 1979, when Mrs. Thatcher came to power, the UK had a per capita GDP of \$6400, and a decade later it was about \$17100, in current terms. At that time, round about 1990, Argentina was experiencing high inflation (well over 100% between 1990 and 1991) and, consequently, assessment of per capita GDP is difficult,

but it was probably about \$ 6400. The industrial sector in the UK employed about 48% of the population in 1990; in Argentina only 15%.

A second major difference was in the abruptness of change. The UK had experienced economic stagnation in the latter part of the 1970s due to both external and internal developments. GDP had grown very slowly, due partly to the adverse effects of the two substantial increases in petroleum prices during the decade, but also to the perhaps inevitable divergence between union and government objectives in a time of apparantly widening gaps in productivity growth between the UK and its main competitors. However, although Mrs. Thatcher had a mandate for change, changes in overall policy direction did not occur overnight and, indeed, major privatizations did not occur until her second government.

By contrast, Argentina, which from 1976 to 1983 was under military rule, had experienced difficulties in the transition to democracy. Between 1983 and 1989, three economic plans (Austral, Primavera, Bung y Born) had been attempted, but none had succeeded in establishing the economy on a sustainable basis. It is estimated that GDP declined by about 10% between 1986 and 1990 and, thus, the industrial resources of the country were probably significantly underutilized at the point when radical reforms were introduced. These reforms essentially moved Argentina out of a protectionist phase, characterized by high tariffs on consumer and capital good imports, and strict controls on capital movements and foreign ownership of businesses. In about two years, through 1991, the situation was dramatically changed. The Peso was tied to the US \$ at par, through the so-called "Convertibility Plan", and capital and foreign ownership controls were abolished. At the same time, a substantial privatization program took place.

Foreign capital flowed in at a high rate, substantially going into partial take-over of Argentine businesses, with the payments naturally going to the government. It appears that net Foreign Direct Investment (FDI) amounted to about \$ 14 billion 1990-94 (Bernardo Kosakoff 2000) compared with \$ 3.7 billion in the previous five years. After 1994, net FDI continued at a rate of about \$ 4 billion per year. To a much greater extent than in the UK privatizations, foreign capital substituted for Argentine savings in recapitalizing Argentine industrial and commercial sectors. The foreign participants were used to higher capital/labour ratios than had become the norm in the protected Argentine economy, and thus the economy had a potential for short term growth through capital/labour substitution, higher than was the case in the UK a decade earlier. According to IMF data, which in turn is based upon government statistics, GDP grew by 30% 1990 - 94. Subsequent estimates put the growth rate at about half that figure - still very respectable!

However, it is not clear that the manner of growth was sustainable in the longer run. Government finances, which initially benefitted from privatization, began to deteriorate in 1996 and have sharply worsened since. This resulted from continued growth in expenditure, but with stagnant revenues and, currently, the government is struggling to meet deficit targets set by an IMF agreement. In 1995-98, DFI was equivalent to 20% of government revenue, and, while all DFI did not go into buying SOEs or similar government revenue enhancing activity, it is probable at least 50% did. Thus, unless a substitute source of revenue is found, GOA is going to be forced to cut expenditure, which will exacerbate the recession.

The contrast with the UK is marked. Taking the six year period 1990-95, for which comparable data exists, the following statistics emerge, on the relationship between Privatization Revenues, GDP and Government Revenue:

**Argentina** 

F.I. is the net sum of Foreign direct and Portfolio investment.

Sources: IADB, IMF, Pollitt op cit, Kosacoff et al, op cit.

One other factor worked against Argentina. Argentina is the only country in the Mercosur to have adopted a fixed exchange rate. Its main trading partner and competitor, Brazil, devalued its currency in early 1999. As a result, the Real depreciated sharply against the \$ (and Peso) from R 1.2/\$ immediately before devaluation, to R 2.2/\$ currently. However, the rate of increase of prices within Brazil has been much lower - about 30% (average of wholesale and consumer prices). One result has been a sharp deterioration in the Argentine current account, which had a deficit equivalent to 5% of GDP in 1999, though this has declined with the recession.

In the UK, by contrast, privatization revenues, although substantial, were much less important relative to GDP and, in particular, to government revenues. From 1983, when privatization effectively commenced, to 1996, the annual proceeds were about \$6 to \$7 billion per year. This was equivalent to less than 1% of GDP and 2 to 3% of government revenue; not enough to be really significant by itself. Also, the effect in terms of FDI or other foreign capital inflow, is imperceptible: on average the UK had a net outflow of FDI during the period. A vey high proportion of the payments to the government for SOEs was from domestic savings. It it unclear

<sup>\*</sup> In 1995 the accounting practice was changed and relevant government revenues approximately doubled. Even if such ratios had applied earlier in the period, the Privatization Revenue (PR) impact would still have been much larger in Argentina than the UK.

whether the savings rate was increased or there was diversion from other investments, but there was certainly no shock effect of privatization on the economy.

As a result, the UK economy responded much less perceptibly to privatization, in a direct sense, than did the Argentine. GDP grew very slowly in the decade to 1983 - at under 1% per annum. From 1983 to 1987 (the second Thatcher government) it grew at a rate of over 3 1/2 % pa; high for the UK but low compared with the immediate post-privatization growth in Argentina. The 1987-92 period included a worldwide recession, and GDP grew by only 5% in total. Since 1992, the UK has followed a growth path similar to the USA with GDP increasing 12% 1992-96 (All of the above in real terms, and accompanied by little growth in population).

Employment in manufacturing followed an even more divergent pattern. In the UK, manufacturing employment declined significantly through 1987, increased sharply to 1990 and then lost the gain by 1992, when unemployment rose above 10%. By 1995 recovery had commenced and unemployment declined to 8%. Since then there has been a steady employment increase, resulting in the unemployment rate declining to under 5% by 1999 and even lower currently. In Argentina, unemployment was over 9% in 1990, declined sharply to about 6% for the next two years, then rose to 16% by 1995 and has remained stubbornly about 15% ever since. The Argentine employment and unemployment figures must be considered suspect. Taken at their face value, with the growth of output, they imply a rate of growth of labour productivity of about 8% per year, over several years, which would be virtually unprecedented.

Employment and unemployment figures are not as significant data in measuring economic growth or influencing government policy as they were two decades ago. Of possibly more significance in shaping policy are central government finances, in which similar contrasts are apparant. After nearly reaching equilibrium between revenues and expenditures in 1995, Argentine governmnt (inc. provinces) has seen revenue virtually stagnate, while expenditures (partly on debt service) have grown persistently, resulting in current attempts to increase revenues to meet IMF targets - which may further depress domestic demand. The UK, by contrast, has seen revenues grow strongly (up by more than a quarter between 1995 and 1999) while expenditure increased by only 10%, though significantly increased expenditure on government services is now budgetted.

Despite uncertainties regarding the accuracy of data, the implications of the above analyses seem clear. Privatization qua privatization had a much greater impact in Argentina than in the UK. For reasons which are beyond the scope of this paper, Argentine privatization relied much more heavily on foreign investment than in the UK. The main effect was that the short-run transformation of society was much more spectacular, but also more fragile; once the inflow of foreign capital declined, because there was little left to privatize, the economy did not generate its own dynamic. This was aggrevated by the effect, of weak agricultural prices and the Brazilian devaluation, on exports.

This is not to say that privatization did not affect the UK, but most analysts (Pollitt op cit) have concluded that the effects were more in terms of stimulating movements away from traditional sectors, such as iron and steel, coal...to a more technological base, than in the efficiency stimulating effects of privatization per se. Furthermore, the UK believed to a greater extent than

did Argentina in the concept of natural monopolies, and introduced rigorous oversight (regulatory) provisions. The operational cost of the various regulatory agencies is now about \$ 100 million annually in the UK. Regulation is at a low level in Argentina.

## A final word

This paper is entitled "Privatization; A Means, not an End." Many observers believe that privatization should be an end in itself. This is certainly the position of those who believe that the role of government should be minimal. I believe, however, that if privatization is not accompanied by competition, there is considerable danger that there will be merely a change from SOE monopoly or highly imperfect competition, to the same conditions under private ownership. Competitive conditions may be simulated by regulation, but the "deadweight" costs of regulation can be important, not solely in financial terms, but in the interference with managerial decisions. Privatization should be approached on a case-by-case basis, and if scale economies or externalities are important, or if the service has a public good characteristic, the best policy may be to leave the activity within the public sector, but to try and ensure that government involvement is limited to setting broad policy objectives, consistent with maximizing welfare.

## References

1/ The definition of privatization is that used by Vickers and Yarrow (below) " The transfer from government to private agents of ownership rights relating to the supply of goods and services."

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