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# Privatisation in Developing Countries: A Review of the Evidence and the Policy Lessons

DAVID PARKER and COLIN KIRKPATRICK

*Privatisation is widely promoted as a means of improving economic performance in developing countries. However, the policy remains controversial and the relative roles of ownership and other structural changes, such as competition and regulation, in promoting economic performance remain uncertain. This article reviews the main empirical evidence on the impact of privatisation on economic performance in developing economies. The evidence suggests that if privatisation is to improve performance over the longer term, it needs to be complemented by policies that promote competition and effective state regulation, and that privatisation works best in developing countries when it is integrated into a broader process of structural reform.*

## I. INTRODUCTION

Privatisation has been promoted in developed and developing countries alike since the 1980s. Although recent reviews of the international effects of privatisation have been generally favourable to privatisation [Kikeri and Nellis, 2001; Megginson and Netter, 2001; Shirley and Walsh, 2001], rather less consideration has been given to the differences in post-privatisation outcomes in the advanced and lower-income economies. As a result, the consequences of privatisation within developing countries remain controversial.

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The term privatisation has been used to cover an array of different policies. In this article its meaning is restricted to the transfer of productive assets from the state sector to the private sector. There have been a number of studies reviewing the impact of transferring productive assets to the private sector in industrialised economies. On balance they suggest that privatisation, *per se*, may not be the critical factor in raising productivity and reducing production costs. More important is the introduction of effective competition or regulation and organisational or political changes [*for recent reviews of the literature, see Martin and Parker, 1997; Villalonga, 2000; Megginson and Netter, 2001; Prizzia, 2001; Shirley and Walsh, 2001*]. By contrast, there has been little in the way of recent study focusing on a review of the evidence for developing countries.<sup>1</sup> This article endeavours to address this gap in the literature.

Until the 1980s international policy tended to favour state planning and state ownership to lever investment and capital accumulation as part of economic development. By the end of the decade however, sentiment had changed in donor agencies and a number of governments in the face of developments in economic theory and mounting evidence of 'state failure' [*World Bank, 1995*]. Under conditions of perfect competition, perfect information and complete contracts, publicly owned and privately owned firms would have the same level of performance [*Sappington and Stiglitz, 1987; Shapiro and Willig, 1990*]. But recent advances in property rights and principal-agent theory in economics have emphasised the importance of private property rights in providing optimal incentives for principals to monitor the behaviour of their agents in the face of incomplete information, contracts and markets [*Boycko, Shleifer and Vishny, 1996*]. At the same time, developments in public choice theory have concentrated on the behaviour of agents within government and their tendency to pursue their own interests, or the interests of special interest groups, over the public interest [*Niskanen, 1971; Buchanan, 1972*].

Privatisation activity grew significantly in developing countries during the 1990s. Estimated privatisation revenues totalled US\$250 billion between 1990 and 1999 [*World Bank, 2001*]. Infrastructure privatisation, mainly in telecommunications and power, accounted for a large share of these privatisation sales. Foreign participation in developing country privatisations has also increased and reached 76 per cent of total proceeds in 1999, of which foreign direct investment accounted for 80 per cent. Privatisation activity in developing countries has been unevenly distributed with Latin America accounting for most of the privatisations. In contrast, privatisation sales in sub-Saharan Africa accounted for only 3 per cent of total developing country proceeds between 1990 and 1999. This growth of privatisation activity in developing countries has led to a decline in the share of value added in GDP

contributed by state-owned enterprises (SOE) [*Shesthinski and Lopez-Calva 1999, quoted in Kikeri and Nellis, 2001*].

The continuing popularity of privatisation as a policy instrument in developing countries underlines the need for systematic study of its effects, as a means of informing policy making. The objective of this article is therefore to provide an evidence-based assessment of post-privatisation performance in developing countries. Section II of the article briefly discusses the major problems that arise when conducting ex post performance assessment studies. Section III considers the empirical evidence on the impact of privatisation on sector- and firm-level economic performance in developing countries, and identifies the various factors that have affected the post-privatisation outcomes. Section IV discusses the implications of the evidence for policy and Section V provides conclusions.

## II. ASSESSING THE EFFECTS OF PRIVATISATION IN DEVELOPING COUNTRIES

Assessing the impact of privatisation is difficult due to a number of methodological problems. First, to assess the effect of a policy change such as privatisation, we need a counterfactual and this is inevitably problematic. Knowing what would have happened to an economy or an industry in the absence of privatisation is usually very uncertain [*Martin and Parker, 1997*]. Second, the variables to measure when assessing performance may not be obvious. Privatisation may be found to have improved performance, or not, depending upon the objective of the privatisation and the performance measure used. In particular, measuring changes in profitability will tend to flatter privatisation if under state ownership non-profit goals were deliberately pursued, for example, higher employment or lower prices. Third, privatisation can be expected to generate relative price changes affecting both output and input markets with spill-overs into other sectors of the economy. Consequently, privatisation is ideally assessed using a general equilibrium model and one that distinguishes the impact on different markets and different socio-economic groups. However, general equilibrium modeling is notoriously complex and requires data that usually are not available to the researcher. Also, predicting income redistribution effects may not be straightforward. For example, it could be richer consumers who benefit most from lower electricity and water prices following privatisation because the poor are not connected to the systems. Also, non payment for services adds complexity when calculating income distribution effects: in a number of developing countries there are high levels of unauthorised connections to utility services [*Lalor and Garcia, 1996*]. Fourth, performance may result from a *demonstration effect* under which the attention that centres on an

industry being privatised engenders performance improvement in the short run. In which case short-run performance improvements may be misleading and the time period over which performance is assessed should be lengthened [Villalonga, 2000]. The opposite effect is also possible, with a short-run deterioration in performance, followed by a longer term recovery and the necessary restructuring measures being implemented.

Finally, determining causality is an important issue in empirical work. It is problematic to assess the impact of privatisation programmes where the relationship between performance and policy is unclear. Performance may change because of other economic events contemporaneous with privatisation, including more macroeconomic stability, fiscal prudence, freer capital movements, promotion of competition and regulatory changes.<sup>2</sup> Performance may also be affected by institutional and structural factors, for example, the quality of the regulatory and other governance institutions [Rodrik *et al.*, 2002; Jalilian *et al.*, 2003]. Separating out the precise effects of privatisation then becomes problematic in the absence of the necessary independent data and model flexibility. These different results emphasise that causation may be complex, reflecting factors entering into both the incentives and opportunity for governments to sell assets and the public to buy them [Manzetti, 1999]. Causality problems are particularly evident in studies that have attempted to assess the relationship between privatisation programmes and growth at the economy-wide level because the pace of economic growth may affect the propensity to privatise – in principle in either direction. Modelling at the highly aggregated level also risks introducing serious variable omission problems, so that privatisation is credited with results that lie elsewhere, for example, in wider institution building and macroeconomic stability programmes. The difficulties involved in undertaking such highly aggregated study and specifying an appropriate model may help to explain the differences in the reported results [Plane, 1997; Barnett, 2000; Davis *et al.*, 2000; Cook and Uchida, 2002].

In assessing the impact of privatisation in developing economies, broadly two sets of studies exist. One set uses statistical data to undertake an assessment of the effects of ownership on performance, using a range of performance variables, for example, profitability, productivity, costs of production and financial ratios. Typically, these studies attempt to model the relationship between dependent and independent variables with a view to measuring the separate effects of each independent variable, where the dependent variable is some measure of economic performance and ownership is one of the explanatory variables alongside variables relating to outputs, inputs and 'controls'. Carried out correctly, this type of econometric study avoids erroneous correlations and replaces casually associated and unquantified cause and effect relationships with more precise measurement. However,

econometric analysis is dependent on adequate data both in terms of quantity and quality to carry out the necessary estimation and each estimation model is subject to its own set of limitations. In particular, spurious correlations result where models are mis-specified.

An alternative approach is to study privatisation through case studies. Case studies usually provide a rich source of descriptive data and more readily address qualitative as well as quantitative effects. They can identify specific responses that may be lost in the aggregation that goes into econometric analysis. Case studies, however, have their own set of limitations relating to both the collection of information and the interpretation of events. Whereas econometric studies derive from theoretical economic models (for example, production and cost functions), case study work is often detached from an explicit theory and inductive in nature. Inductive research leaves more latitude to the researcher to determine what information to collect, which can be both a bonus in terms of the comprehensiveness of the study and a weakness in terms of the normative nature of the data selection. At the same time, it is important to recognise that econometric studies are not free from similar problems.

### III. THE EVIDENCE

This section presents the evidence on the impact of privatisation on economic performance in developing countries, and identifies the various factors that have affected the post-privatisation outcomes. The evidence is presented at the firm and sector level.

#### *Firm-level Studies*

The well-known study carried out for the World Bank by Galal, Jones, Tandon and Vogelsang [1994] compared the performance of 12 large firms, mostly airlines and regulated utilities, in three developing economies, Chile, Malaysia and Mexico (and one developed country, the UK). The study attempted to control for the counterfactual and used a performance methodology linked to social welfare maximisation; although the study stops short of full general equilibrium modelling. It endeavoured to explore both the changes in economic efficiency and welfare effects of privatisation by looking at price and output changes and the impact on consumer and producer surplus. The study concluded that in 11 of the 12 cases considered net welfare gains resulted, on average equalling 26 per cent of each firm's pre-divestiture sales. This result is a considerable welfare gain and Galal, Jones, Tandon and Vogelsang found that it was obtained without negative welfare effects for employees. Their study is therefore cited frequently as confirmation of the merits of a neoliberal agenda. However, the study has

some weaknesses. First, the data set is very small, consisting of only 12 firms and only three developing countries, all middle income. The degree to which the results can be generalised across the developing world, especially to lower income economies, is far from clear. Second, the effects of ownership, competition and regulation on performance are not separately modelled, leaving open the possibility that economic gains attributed to privatisation may have resulted from other structural reforms – as suggested by some of the studies reviewed below.

Alongside the study by Galal, Jones, Tandon and Vogelsang, the research by Megginson *et al.* [1994] is also extensively cited. Megginson *et al.* compared mean performance results for three years before and three years after privatisation, using a data set containing 61 firms in 32 industries in 18 countries. The firms had been either partially or wholly privatised through public share offerings, in the period 1961 to 1990. Megginson *et al.* report that privatisation was associated with higher profitability, more efficiency, larger sales and more capital investment. However, the study was dependent on creating a data set from various sources, with possible data inconsistencies resulting from different accounting practices. Also, as the term ‘privatisation’ is used in their paper to describe *any* share disposals by government, it is not clear how many of the privatisations included really involved the removal of state control. If the firms which improved their performance included firms that remained majority state owned, the conclusion that privatisation improves performance becomes ambiguous. Moreover, like the study by Galal *et al.*, the research does not separately identify the effects of ownership from other structural variables that might be expected to impact on performance, notably changes in competition and state regulation.

A later study by D’Souza and Megginson [1999] based on 85 companies in 28 countries including 13 developing economies, between 1990 and 1996, is complementary to that by Megginson *et al.* It reports higher mean levels of profitability, real sales and operating efficiency, significant reductions in leverage ratios, and insignificant changes in employment and capital spending following privatisation. The sample of companies includes a much larger fraction of firms from regulated industries (mainly telecommunications and electricity) than in the Megginson *et al.* paper. But like this study and other studies based on mean figures for financial and economic variables pre- and post-privatisation, the counterfactual remains troublesome. In particular, such studies do not control for *trends* in the data. For example, a firm with a trajectory of rising profitability will have a higher mean profit figure after privatisation, even if privatisation has had a nil effect on the trend.

The study by Dewenter and Malatesta [2001] covers 63 firms privatised between 1981 and 1994. They conclude that based on return on sales and assets, profitability increased, as did productivity; although profitability

measured as earnings before interest and tax as a ratio of sales and assets declined, underlining the sensitivity of results to the performance measure used. The study by Dewenter and Malatesta adopts a similar method to that used by Megginson *et al.* and D'Souza and Megginson and reports similar findings.

A limitation of all of these studies is that they do not report separate results for developing and developed countries. The use of aggregated data from a number of economies means that possible differences in response between developed and developing countries or between regions is concealed. In other words, there are potential data heterogeneity problems leading to average results that may mislead.

By contrast, Boubakri and Cosset [1998] look at developing countries only. They examine the financial and operating performance of 79 firms involved in privatisations in 21 economies over the period 1980 to 1992. They also find significant improvements in profitability, operating efficiency, capital investment, output, total employment and dividends. However, while narrowing the sample to include only developing countries is superior to amalgamating data from developed and developing economies, their result may still conceal some differences across countries and sectors (they do report that privatisation had greater benefits in higher income developing countries and where governments surrendered voting control). To provide a finer grained analysis, the remainder of the evidence reviewed is concerned with sectors, and includes both cross-country and single-country sectoral studies.

### *Sectoral Studies*

Most sectoral studies involving developing countries have focused on reform in utilities, particularly telecommunications. This is because the telecommunications sector has been especially affected by privatisation worldwide. According to Li *et al.* [2001] roughly 2 per cent of telecommunications firms in 167 countries were privatised in 1980, but by 1998 the number had increased to 42 per cent. Also, data tend to be more readily available for measuring performance in telecommunications than in other industries because the International Telecommunications Union (ITU) in Geneva publishes input and output data from countries annually.

The study by Ros [1999] is based on data for 110 developed and developing countries between 1986 and 1995 and uses a fixed effects panel data model.<sup>3</sup> The results suggest that where there is at least 50 per cent private ownership in the main telecom firm, teledensity levels (service coverage) and output growth rates are significantly improved. He also argues that while privatisation and competition both raise efficiency, only privatisation is positively associated with network expansion. However,



possible differences in outcomes in developed and developing countries are not explored.

By contrast, the paper by Wallsten [2001] focuses solely on developing economies, namely 30 African and Latin American countries between 1984 and 1997. Using panel data and fixed-effects regression techniques, Wallsten concludes that competition is significantly associated with increases in per capita access to services and decreases in the price of local calls. He finds, however, that privatisation alone was *not* beneficial and was negatively correlated with connection capacity. Performance gains occurred due to competition and when privatisation was coupled with effective and independent regulation: 'Interpreted casually, these findings are broadly consistent with conventional wisdom: competition is the most effective agent of change, and privatising a monopoly without concurrent regulatory reforms may not necessarily improve service' (ibid.: 2). This study underlines a problem in econometric analysis mentioned earlier, which is the need to separate out the effects of ownership from other structural reforms. It is therefore an advance on earlier studies. However, it still retains some weaknesses. In particular, the competition variable used – namely, the number of wireless operators in a country not owned by the incumbent main lines operator – is a limited indicator of competition across the entire telecommunications sector. Similarly, the regulatory dummy – which is whether a country has a separate telecommunications regulatory agency – does not reveal the extent to which regulation is operational and effective. The variables used are those readily obtainable from published data and are used as broad proxies in the absence of better alternatives, but they may conceal the true extent of competition and regulation. Also, and importantly, while it might be expected that differing levels of state ownership would impact on performance, the privatisation dummy does not reflect the percentage of state shares sold.

Wallsten's study is limited in terms of variable specification for ownership, competition and regulation, the very structural variables it is trying to estimate. Complementing Wallsten's study is that by Bortolotti *et al.* [2002] who look at the financial and operating performance of 31 national telecommunications companies in 25 countries, including 11 non-industrialised ones, and where telecommunications firms were fully or partially privatised through public share offerings. The period covered is October 1981 to November 1998. By including both developed and less developed countries in the data set, this study, as in the case of a number of the studies already reviewed, suffers from potential data heterogeneity problems. The study also uses mean and median statistics for periods three years before and three years after the privatisation event, similar to the approach first used by Megginson *et al.* It therefore has the same limitations of focusing only on a

very short time period and may over-estimate performance improvements following privatisation where there are time trend effects.

Profitability, output, labour productivity and capital investment increase significantly after privatisation, according to Bortolotti *et al.* By contrast, employment and financial leverage (gearing) decline significantly.<sup>4</sup> The results are first assessed using a Wilcoxon signed-rank test and a proportion test to identify chance events.

Later random and fixed effects panel data models are used to explore the separate effects of privatisation, competition and regulation. In addition to verifying that privatisation significantly increases profitability, output and efficiency and lowers gearing, they discover that competition reduces profitability, employment and, surprisingly, efficiency after privatisation. Also, they report that the creation of an independent regulatory agency significantly increases output; while mandating third party access to an incumbent's network, so as to promote competition, is associated with a statistically significant decline in the incumbent's investment and an increase in employment. Finally, they find that price regulation increases profitability.

Bortolotti *et al.* conclude that their results are consistent with privatisation and competition increasing management efficiency incentives. But some of their results are not obviously intuitive. In particular, we might not expect to find that price regulation increases profitability or that competition reduces efficiency after privatisation. The former result, they suggest, may be explained by the efficiency incentives that exist under price cap regulation; while the latter result may be because of increased investment after privatisation – although a related explanation, which they do not consider explicitly, is the loss of scale effects as competitors enter an industry with high fixed costs. Overall they conclude that: '... the financial and operating performance of telecommunications companies improves significantly after privatisation, but that a significant fraction of the observed improvement results from regulatory changes – alone or in combination with ownership changes – rather than from privatisation alone' (ibid.: 266). The finding that regulatory effectiveness is important in determining the outcome of privatisation is consistent with the finding of Wallsten's paper. It re-emphasises that privatisation alone may be insufficient to improve economic performance, especially where one firm continues to dominate the market.<sup>5</sup>

The study by Bortolotti *et al.* also draws attention to the potential importance of differing levels of continued state ownership after 'privatisation'. In their study, as in Wallsten's, the privatisation dummy is incapable of differentiating between differing levels of state ownership. But Bortolotti *et al.* reveal that in their data set of 31 telecoms firms studied, the government sold its entire stake in only three (Telecom Argentina, Manitoba Telecom Services and New Zealand Telecom) and in 20, the state retained a majority

holding. The average state shareholding sold across their sample was 34.2 per cent. This means that the Bortolotti *et al.* study – and this probably applies also to Wallsten's study – should be interpreted as a study of the effects of, in the main, a minority sale of state shares. In other words, they are studying structural changes that fall well short of true privatisation, defined as the sale of at least a majority of the voting shares and therefore a transfer of control to the private sector. If studies appear to find that performance improves *even when the state remains the dominant shareholder*, it is not clear from economic theory why this should be so. A partial sale may reduce political intervention, but this is neither necessarily the case nor does the result appear to have been investigated empirically. It is also unclear why management should be differently incentivised to pursue efficiency gains when some state shares are sold but state control remains.

The Bortolotti *et al.* paper – like that by Wallsten – has data deficiencies, falling back on proxy variables for regulation and competition. Their competition variable is simply the number of licensed operators in the mobile telephony market; while regulation is proxied by three variables, namely a dummy variable for the date an independent agency was established in law, a further dummy for the introduction of third party access and interconnection rules, and a dummy variable from the date when price cap or rate of return regulation was established in law. The same criticism that applies to Wallsten's competition dummy applies to that used by Bortolotti *et al.*, while the regulation dummies, although they are a clear improvement on the single proxy used by Wallsten, fail to reflect the impact of regulatory laws. This is important because what should be measured is the *effectiveness* of regulation, but the dummies used are concerned simply with the introduction of regulatory changes.

Like many of the studies reviewed here, Bortolotti *et al.* rely on firm-level accounting data, covering periods when we might reasonably expect accounts to be subject to considerable restructuring ahead of government sales.<sup>6</sup> For instance, it is not unusual for governments to write off some or all of the debts in the balance sheet ahead of a sell-off and state ownership may involve little or no formal equity holding. Where this is the case, it is then a trivial finding that gearing levels are affected by privatisation. In addition, where nominal values are converted into real figures for analysis using consumer price indexes, they may not capture the true price effects. Telecoms services can be expected to have price trends different to the general economy because of changes in technology, regulation and competition. The result may be bias in the valuation of inputs and outputs. In other words, although Bortolotti *et al.* have contributed to the literature on the impact of privatisation on telecommunications, their study has a number of possible shortcomings.

Turning to other studies of telecommunications, Ros and Banerjee [2000] find a positive and statistically significant relationship between privatisation and network expansion and efficiency in Latin America. This study is an advance on those so far reviewed because it is more careful in its definition of privatisation, including only firms where at least 50 per cent of assets or shares were transferred to the private sector. However, it is restricted to Latin America only. A further study, by Petrazzini and Clark [1996], concludes that both deregulation and privatisation are associated with significant improvements in teledensity (service coverage) in 26 developing countries, although in their study there is no obvious impact on service quality.

A recent paper by Fink, Mattoo and Rathindran [2002], using a panel data set for 86 developing countries over the period 1985 to 1999, based on a new World Bank data base that builds on ITU data, argues that both privatisation and competition lead to significant improvements in performance. However, policy reforms that include independent regulation produced the largest efficiency gains. Lastly, a further study, this time by Gutierrez and Berg [2000], looking at privatised telecommunications in Latin and Caribbean countries, found that regulation is an important determinant of telecommunications density growing quickly. In general, the results for this study are consistent with those reviewed earlier, being supportive of privatisation but placing the emphasis as much, if not more, on the attainment of competition and effective regulation.

By comparison with the number of studies of telecommunications privatisations in developing countries, there are far fewer econometric studies of other infrastructure sectors such as energy, reflecting the more ready availability of telecommunications data. This is important because it is not clear how far the results for telecommunications will transfer to other industrial sectors. Telecommunications is subject to major technological change, leading to scope for fast output growth, reduced costs and new competition. These opportunities may be missing for sectors facing more restricted growth trends.

Energy is probably the other utility sector with the most scope for expansion and competition in developing countries, because of existing inadequate supplies. Pollitt [1997] seems to have been the first to study the impact of privatisation on electricity supply econometrically. He concluded that privately owned suppliers did out-perform state-owned ones, but his analysis is for an early period when there was little privatisation activity in the developing world. Bortolotti *et al.* [1999] conclude that effective regulation is a crucial institutional variable in electricity privatisation because it facilitates the pace of privatisation and affects the proceeds obtained. But like Pollitt, this study is concerned with both developed and developing countries and therefore data heterogeneity again arises.

Two recent studies, by Zhang, Parker and Kirkpatrick [2002, 2003], are the first to model the impact of privatising electricity generation in developing countries only, using panel data for up to 51 economies, between 1985 and 2000 or 2001. These studies, using fixed effects panel data modelling, confirm that competition increases service penetration, capacity expansion and labour productivity, but that the effect of privatisation alone is statistically insignificant except for capacity utilisation. They also confirm that the sequencing of reforms is important. The establishment of an independent regulatory authority and the introduction of competition before privatisation are correlated with higher electricity generation, higher generation capacity and, in the case when competition is introduced before privatisation, improved capital utilisation. The implication for policy is that privatisation alone is unlikely to lead to improved performance in terms of productivity and services and that it is desirable to introduce competition and effective state regulation before rather than after privatisation occurs. These results complement those of Wallsten for telecommunications, reviewed above.

The case study evidence for power privatisation also suggests a complex relationship between private investment and performance changes. Case studies of electricity privatisation in Argentina, Peru, Chile and Brazil, reported in Gray [2001: 6–8], suggest that the results were fewer blackouts, higher labour productivity and lower electricity losses. The productivity increases also led to lower consumer prices; by 40 per cent within five years in Argentina's electricity sector and 25 per cent within ten years in Chile [*Estache, Gomez-Lobo and Leipziger, 2000*]. Plane's [1999] study of total factor productivity and price changes in the privatised electricity company in Cote d'Ivoire suggests that privatisation has brought about benefits for consumers. But other studies are more equivocal about the consequences of privatisation. For example, Gupta and Sravat [1998] provide an overview of private power projects in India and demonstrate both benefits and risks. While private power projects introduce valuable, external, private financing to state power industries suffering from under-investment and consequent power supply disruptions, their work confirms the difficulties that can arise in terms of establishing and maintaining an environment conducive to private investment. The Indian power sector has been affected by a high level of transmission loss and disagreements have erupted both over the terms of the initial concession agreements and subsequent performance. Transmission and distribution losses are reported at 23 per cent; but analysts believe this may be an under-estimate and losses may be as high as 40 per cent [*Teri, 2003*]. Attempts to introduce competition into the Brazil power sector have also led to costly disputes [Gray, 2001: 19].

A number of studies of water and sewerage provision, privatised mainly through concessions, have been generally favourable to privatisation. In Gabon the first two years of private operation led to a 25 per cent improvement in service continuity and improved billing [*Gray, 2001: 8*] and concessions for water and sewerage systems in parts of Bolivia are reported to have provided benefits in terms of new connections [*Estache, Gomez-Lobo and Leipziger, 2000; Gray, 2001: 6*]. Concessions to private operators are reported to have led to improved services and higher productivity in Buenos Aires, Columbia and Guinea [*Gray, 2001: 9*]. In Buenos Aires there was a 14 per cent reduction in water tariffs following privatisation [*Alcazar, Abdala and Shirley, 2000*]. However, there is a clear need for further studies of the impact of privatisation on the economic performance of major utilities in developing countries, other than telecommunications, before strong conclusions can be safely drawn.<sup>7</sup> A lack of comparable cross-country data appears to be the main constraint on undertaking such study, suggesting a case for international donor agencies to fund the collection and publication of data.

The above review of the empirical literature has been necessarily selective and has concentrated on those studies that provide pointers to the factors and circumstances that affect the performance outcomes of privatisation in developing countries. Both the sectoral and firm-level evidence are broadly favourable to privatisation, suggesting that privatisation often leads to improvements in production, productive efficiency, prices and service delivery, while also confirming that privatisation alone may not be sufficient to raise economic performance. We have also seen how the bulk of the evidence on developing economies relates to the telecoms sector, which has been the sector subject to the most privatisation activity, reflecting its potential for profitable investment because of fast technological change. But it is not clear that the results for this sector are a reliable indication of likely performance improvements from privatisation in other industries. The electricity sector in developing countries attracted private investment in the 1990s, but research suggests that competition and effective state regulation are as critical here as in telecoms in ensuring that performance improvements occur when state enterprises are privatised. Moreover, the power sector has seen some costly disputes between investors, regulators and governments. Recent evidence from the World Bank confirms a sharp drop in private power sector investments in lower income economies since the late 1990s, reflecting institutional difficulties.<sup>8</sup>

In summary, the relationship between privatisation and performance improvement is complex and superior post-privatisation performance is not axiomatic. The evidence points to the roles of competition and regulation in performance and reveals that introducing more market competition and effective state regulation may be crucial in ensuring that economic

performance improves. In addition, a wider range of institutional issues, including improving political, legal, management and financial capacity within countries will affect the impact of privatisation on performance when privatisation occurs in low-income countries. Where these capacity constraints are often acute, the result may not be the creation of a more competitive and dynamic economy, as assumed by the champions of the policy, but monopoly or imperfect markets.

The review of the evidence has also revealed all of the problems that can affect comparative efficiency studies, as detailed earlier, namely: determining the counterfactual; selection of the appropriate performance variables; partial over general equilibrium modelling; determining causality; and selecting the correct time period to review. None of the econometric studies addresses the counterfactual directly and where causation is uncertain – good economic performance might lead to privatisation rather than vice versa – it remains unclear what net contribution privatisation actually makes to economic welfare. Most studies deal with performance at the industry or sectoral level. The studies vary in terms of the financial and economic performance measures and show that privatisation measures can lead to widely differing results. Moreover, the econometric research either tends to be at the high level of international comparison, and therefore suffers from potential data heterogeneity problems, or centres on the telecommunications sector in developing countries, a sector that may not be typical of other sectors of the economy.

#### IV. LESSONS FOR POLICY

In spite of the limitations of the empirical evidence, it is possible to draw a number of lessons for policy that can inform the design and implementation of privatisation programmes in developing countries. In doing so, it is important to recognise that country characteristics may significantly affect privatisation policies and therefore firm strategy and performance [*DeCastro and Uhlenbruck, 1997*]. ‘In all societies formal rules enacted by the state influence social behaviour only indirectly, filtered through layers of formal and informal social institutions, and normative patterns and practices.’ [*Picciotto, 1999: 3*]. It is also important to recognise that country characteristics differ significantly within developing economies.

In the main, privatisation developed as a policy strategy in the developed economies. These economies benefit from mature capital markets with stock exchanges, venture capitalists, banks and other loan creditors, a well functioning legal system that protects private property rights, and conventional standards of business behaviour (‘business ethics’) that facilitate market exchange. None of these institutions can necessarily be taken for



FIGURE 1  
PRIVATISATION: SUMMARISING THE DIFFERENCES BETWEEN DEVELOPED AND  
DEVELOPING ECONOMIES

Commonly found features of:	
Developed countries	Developing countries
Competitive product markets	Imperfectly competitive and incomplete markets
Organised and competitive labour markets	Regionalised and sometimes ethnically distinct labour markets, with appointments through connections
Competitive capital markets	Under-developed capital markets
Competitive managerial labour markets; institutionalised management training	Management weaknesses and patronage in appointments
Protected and well-defined private property rights; understood standards of business conduct	Poorly protected private property rights; under-developed business codes of behaviour
Usually relatively high standards of probity in public administration	Relatively low standards of probity in public administration in a number of countries, including cronyism and corruption

granted in developing economies. The economic foundations of privatisation lie in theories concerned with property rights and principal–agent relationships, as briefly introduced earlier, with the principals (shareholders) more effectively controlling managerial discretionary behaviour than state officials or politicians. However, in developing countries these theories, with their emphasis on effective ‘corporate governance’, are not obviously applicable.



To begin with, developing countries lack liquid capital markets to facilitate share trading and the takeovers that police management behaviour in the private sector in the USA and UK. In other countries, such as Japan and Germany, this management monitoring role is filled by banks that have deep relationships with firms, but in developing countries the banks may be badly under capitalised, lack business experience and operate within a weak regulatory and supervisory regime [Brownbridge and Kirkpatrick, 2002].

Figure 1 provides a summary of what appear to be the critical differences between markets, management, property rights and government in developed and developing countries. Of course, there are differences *within* both developed and developing economies as well as between them and hence the listing provides an over-stark caricature of the differences. Nevertheless, the summary highlights important tendencies that are likely to mean that privatisation impacts differently in the developed and developing world. Differences exist in product, capital and management labour markets: private property rights tend to be less well defined and protected, business conduct conducive to mutually beneficial trading is less well entrenched, and government probity less guaranteed.

### *Privatisation Objectives*

In developed economies the prime objective of privatisation, leaving aside raising funds for government, is to increase economic efficiency. The emphasis is on raising productivity and reducing costs of production and this is reflected in the studies of privatisation undertaken in these countries, which focus on performance at the enterprise level [see, for example, Martin and Parker, 1997]. By contrast, in developing countries obtaining maximum output from scarce resources, while remaining an important objective, is joined by two priority goals, namely poverty reduction and sustained economic development.

Most of the published studies provide little, if any, information about the impact of privatisation on long-term economic growth; while those studies that have looked at its effect provide mixed results. The studies by Plane [1997], Barnett [2000], Davis *et al.* [2000] and Cook and Uchida [2002] address whether economies with higher levels of privatisation achieve higher rates of economic growth, using macroeconomic data. We might expect privatisation to benefit growth by raising the return to private capital accumulation, but it could damage it if economic efficiency is not increased or if the quality of human capital is adversely affected [for example, through reduced training and worker health; see Pineda and Rodríguez, 2002]. While Plane and Barnett find that privatisation does lead to higher economic growth, Cook and Uchida reject the idea. Davis *et al.* find a positive relationship between privatisation and growth, but interpret their privatisation variable as

a proxy for a wider range of structural changes. This is not to say that privatisation will not promote growth, rather that research needs to be directed at assessing its impact on this key development objective. Privatisation can promote economic growth by increasing investment and improving efficient resource use, but it may also reduce growth where private investment is not forthcoming and key sectors of the economy underperform following the state sell-off.

Interestingly, none of the studies relating to developing countries, reviewed above, has looked directly at the impact of privatisation on economic development and poverty reduction. The assumption seems to be that a more efficient use of resources must contribute to raising economic growth and, in time, reducing poverty. But the link is at best implied rather than formally expressed. The impact of privatisation on poverty reduction is unpredictable because it may help reduce poverty by increasing incomes and expanding services, while at the same time increasing poverty through higher prices and reduced employment and tax payments. Privatisation can lead to fewer jobs, but it may lead to better or worse paid ones, so again the welfare outcome is not obvious [Kikeri, 1998]. The impact of privatisation on the distribution of assets and income is equally unpredictable. Birdsall and Nellis [2002] conclude that most privatisation programmes appear to have worsened distribution, at least in the short run. They note, however that this is more evident in the transition economies than in Latin America, and less clear cut for utilities such as electricity and telecommunications, where the poor have tended to benefit from much greater access. Similarly, detailed studies of the distributional impact of utility privatisation in four Latin American countries (Argentina, Bolivia, Chile and Peru) show a mixed picture [Ugaz and Waddams Price, 2003]. Prices have often risen as a result of reforms, and this has frequently adversely affected low-income groups more than others, either in absolute or relative (to income) terms. But at the same time, most networks have extended their services and the poor have often benefited from this.

The objectives for privatisation policy in developing countries typically extend beyond the concern for economic efficiency gains that characterises the developed countries. Economic growth, distributional and poverty effects are important components in assessing the welfare impact of privatisation in lower-income economies, although the relative weight that is given to each of these objectives will vary between countries and over time. In view of these multiple goals for privatisation policy, and the limited and sometimes contradictory evidence that is currently available, any pronouncement on the overall impact of privatisation in developing countries must be treated with a considerable degree of caution.

*Competition and Regulatory Capability*

The studies reviewed have highlighted the importance of both effective competition and state regulation.<sup>10</sup> But in developing countries markets may be under-developed and competition less than fully effective. For example, Fernandez *et al.* [1999] demonstrate that privately-owned port facilities in developing countries have led to significant economic costs in the forms of congestion, discriminatory pricing and a failure to develop economies of scale. Few developing countries have operative competition laws to police monopolies and restrictive practices and many lack developed regulatory agencies to tackle abuse in sectors such as telecommunications, power and water after privatisation.

Where they exist, state regulatory bodies in developing countries may be prone to capture by special interests [Killick and Commander, 1988]. A number of studies highlight the threat from 'regulatory capture'. For example, Ramamurti, while complimenting the new private management for gains in productivity and services on the Argentine railways, notes that the government remains highly influential as both an industry regulator and provider of major financial subsidies, bringing with it 'the risk of regulatory failure and capture' [Ramamurti, 1997: 1990]. Petrazzini [1999: 136], in a study of telephone privatisation in Argentina details how, once new investors are introduced into markets through privatisation, their economic and political power makes the later introduction of competition difficult. The future role of competition and regulation also features in the study by Galal and Nauriyal [1995]. They find that those countries that were able to develop effective regulatory regimes to address service and pricing issues (for example, Chile) had much better performance results than those that did not (for example, the Philippines). The same seems to be true of a number of other industries. For example, while privatised seaports have introduced much needed new capital, for example in Chile, Argentina and Brazil, the wider performance results have been mixed, with evidence of a need for effective regulatory systems [Trujillo and Nombela, 2000]. However, such regulatory systems are often opposed by private investors who wish to protect their economic rents.

*Institutional Capacity*

The failure to develop the necessary competition policies and regulatory agencies to prevent market abuse results from a lack of administrative and institutional capacity in many developing countries, which has limited the development and adoption of competition and regulatory measures that meet the particular characteristics and needs of developing countries, as summarised in Figure 1. At the same time it reflects political pressures in

these countries, where the promotion of competition and regulatory laws may not appear to be the most pressing of priorities. Moreover, such policies may face formidable opposition from entrenched interests. The ability to pass new laws is influenced by the policy subsystem complexity or the number and power of actors that will be affected by a legislative change. In the case of developing countries, complicated by possible ethnic and regional diversity, the subsystem complexity can be considerable. Where private investors are concerned, especially powerful trans-national companies, other important actors are introduced that can either promote or oppose structural reforms in pursuit of their own rents.

In some countries private property rights may lack protection, leaving expropriation of private investment as a constant threat. Even where property rights are protected and competitive capital markets are evolving, economies may retain authoritative planning and state direction alongside private ownership [Murtha and Lenway, 1994]. The results of privatisation may be very different to those expected.

In the absence of well developed financial markets, domestic private investment may only be feasible for certain high income groups or families, probably the same elite that controls government [Saha and Parker, 2002].<sup>10</sup> Privatisation to a number of privileged shareholders may lead to rent extraction, as is evident in the privatisation experience of the transition economies, where privatisation has been associated with ineffective corporate governance [Frydman *et al.*, 1999; Djankov and Murrel, 2000; Dharwadkar, George and Brandes, 2000; Filatotchev, 2003]. The alternative is to dispose of shares to international investors, including trans-national corporations, who might also introduce useful management skills and sales networks. Cook and Kirkpatrick [1995: 15] note that the World Bank has been keen to encourage the involvement of foreign investors in privatisations. Moreover, the existence of pre-emptive rights means that minority (foreign) shareholders by law may *have* to be given preference when more state shareholdings in companies are sold [Craig, 2002: 567]. However, large-scale privatisation through sales to foreigners risks the tag of 're-colonisation' and weakens indigenous ownership [Makonnen, 1999]. The resulting pattern of ownership may be politically, economically and socially destabilising.

In general, the evidence suggests that indigenisation is advanced through medium and small-scale privatisations rather than large ones. This is evident in the study of Zambia by Craig [2002], Pitcher [1996] in his study of Mozambique, Stjernfalt [2000] discussing Ghana, and Tukahebwa [1998] reviewing policy developments in Uganda. However, 'unbundling' large enterprises into smaller, independent units ahead of sale, so that they can be afforded by more domestic investors, risks the loss of economies of scale and scope in production and may not be feasible in network industries such as

water and telecoms. Also, where enterprises are sold to the local population, a lack of working capital and management know-how may hinder the firms' subsequent development (as discovered by Torp and Rekve [1998] in their study of fisheries policy in Mozambique). In some cases governments may fail to raise as much revenue for hard pressed budgets as could be raised by an asset sale or the granting of an operating concession to a foreign investor. Even when the bid price is as high from domestic investors, they may ultimately fail to pay over the agreed amounts. Where payments for assets are made in instalments, governments in developing countries appear to be particularly at risk of payment default [Craig, 2002]. Sale to indigenous investors also encourages clientelism and cronyism; this can occur during the sale process when large economic rents are potentially up for grabs, and afterwards when a newly empowered business class presses for political favours. The results may be ongoing, including favouritism when government contracts are placed, continuing protection from competition, and repeated provision of state subsidies.

Institutional capacity has been identified in a number of privatisation studies as a cause of disappointing results. These relate to managerial and administrative capacity within government to privatise successfully and the motivation to privatise [Cook, 1999]. Parker [2002] points to serious weaknesses in the political and administrative machinery that led to frequent delays in Taiwan's privatisation programme. One intriguing paradox in privatisation policy is the apparent belief that governments, which are so self-seeking and incompetent that they are unable to run industries successfully, can nevertheless privatise them efficiently and effectively.

Rohdewohld [1993] illustrates the failures that can occur in developing countries when detailing Nigeria's privatisation programme from the mid-1980s. Driving this policy was the need to satisfy regional and ethnic interests and there was a lukewarm attitude to state sell-offs in sections of the civil service. Another example relates to Zambia. Zambia's programme of privatisation has been acclaimed as a model for the rest of Africa by organisations like the World Bank [White and Bhatia, 1998], but Craig [2000] suggests that the programme has been deeply flawed, allowing the corrupt acquisition of assets by those linked to the ruling political party [see also Ngenda, 1993; Fundanaga and Mwaba, 1997]. Meseguer [2002: 5] comments that in India the privatisation of telecommunications was dogged by corruption; while in Mexico the privatisation of the banks allowed drug traffickers to buy bank stocks and seek election to bank boards.

The scope for rent seeking during the implementation of privatisation programmes is also evidenced by self-seeking behaviour by officials and politicians within public sector departments in China [Duckett, 2001] and the pampering to elites in Latin America [Glade, 1989; ed. Saha and Parker,

2002]. The University of Greenwich Public Services International Research Unit has reviewed the performance of public and private sector suppliers of water in a number of transitional and developing economies [*University of Greenwich, 2001*]. The Unit's research points to a lack of effective competition in tendering for water contracts, corrupt payments to win concessions and ongoing disputes during the contract periods. It also identifies examples of continuing public sector financial support to concession holders.

Developing countries may also face constraints in terms of management capability and capital raising after privatisation [*Yotopoulos, 1989*]. A good example of the difficulty developing countries can face is provided by Torp and Rekve [1998: 83]. Looking at the case of fisheries in Mozambique, a country pursuing a privatisation and market liberalisation programme under the aegis of the World Bank, they highlight a number of problems. While liberalisation of markets has opened up sectors to increased participation by private agents, its effect in terms of reducing prices and removing state support has been to lower the incentives for new investment. Meanwhile a continuing lack of skills and capital has impeded the intended gains from privatisation. Those who have obtained former state assets have often been incapable of managing the assets for long-term benefit, leading to capital consumption. Thus Torp and Rekve argue that social relations are not simply constraints in market liberalisation and privatisation policies, rather such policies are embedded in these relations; hence '... there is a need for cultural and political assumptions and factors related to privatisation to be analysed more fully. These factors should be analysed in a dynamic perspective in their own right, allowing for a fuller understanding of how they relate to the privatisation processes, rather than treating them simply as barriers to economic development.' (ibid.: 91).

Torp and Rekve [1998: 78] also review a number of case studies of privatisation in developing countries and suggest 'that divestiture measures have played only a minor role in the reform of state enterprises, and that various constraints have been more dominant than the actual results'. Adams *et al.* [1992] come to a similar conclusion, pointing to regulatory weaknesses, underdeveloped capital markets and political goals as constraints on successful privatisations [*also see White and Bhatia, 1998 and Nwanko and Richards, 2001*]. In general, and consistent with this finding, they conclude that the most successful privatisations have been in the higher income developing countries where the institutional structure to support private markets is likely to be more developed (ibid: 95, for similar critical studies). Greenidge [1997: 109] after considering the experiences of 27 privatisations in Guyana and pointing to some performance gains, concludes that 'The privatised entities, while perhaps more efficient than their public

sector counterparts, have not been able to overcome the environment in which they operate'

### *Public Sector Governance Capacity*

The evidence from developed countries confirms that in designing privatisation policies the capacity of governments is critical. Public choice theory emphasises self-seeking within government and there is evidence of self-seeking in governments in developing countries as elsewhere [Findlay, 1990]. As politics will drive the decision to privatise and the form privatisation takes [Avisur, 2000], self-seeking during the privatisation process can hardly be ruled out.

The probity and competence of government becomes crucial to ensuring a successful privatisation. Unfortunately, there is evidence in some of the studies reviewed of privatisations in developing countries being associated with poor public sector governance, characterised by regulatory weaknesses, policy failures, incompetence, corruption and cronyism. As Commander and Killick [2000: 149] remind us in their discussion of privatisation: 'The main point is that the conditions necessary for divestiture to be both appropriate and successful are rather restrictive.' Djik and Nordholt [1993] question whether privatisation is an appropriate policy response. They see privatisation as an economic answer to what in developing countries is fundamentally a political problem.

Sachs *et al.* [2000] in a 25-country study of the transition economies (but with clear lessons for developing economies), argue that in response to such failures the reform process needs to go beyond privatisation. It needs to harden budgetary constraints, increase market competitiveness, address agency issues including contracting and incentives and clarify the firms' objectives. They conclude that: 'if complementary ... reforms are not sufficiently developed, change-of-title privatisation may have *negative* performance impact' [Sachs, Zinnes and Eilat, 2000: 39, *emphasis in original*]. This highlights, however, the fundamental challenge facing policymakers in developing countries, namely that the magnitude of the reform agenda varies inversely with the capacity effectively to implement and manage the reform process. In the context of privatisation policy, an important consideration in addressing this constraint is to consider the sequencing and scale of privatisation measures, in relation to the existing institutional and governance capacity [Stiglitz, 2002].

## V. CONCLUSIONS

This article has surveyed the empirical literature on the impact of privatisation on economic performance in developing countries. The results



suggest that policy should focus on the following changes involving capacity building if privatisation is not to disappoint. First, the privatisation objectives need to be articulated to include not only improved economic efficiency (for example, higher productivity) but poverty reduction and long-term economic development. Second, institutional capacity needs to be assessed to ensure that the scale, coverage and sequencing of privatisation are consistent with the available resources in terms of capital provision and management competence to provide the best chance of a privatisation succeeding. Third, administrative competence and probity need to be secured to ensure that the privatisation process is fair, transparent and efficient. Too often in the past privatisation has been promoted by donor agencies without proper consideration of the legitimacy of the process and its likely outcome in terms of social welfare. Lastly, if privatisation is to improve performance over the longer term it needs to be complemented by policies that promote competition and regulatory capacity. At present few developing countries have effective competition authorities and regulatory capacity is low.

The empirical evidence in this article is consistent with the notion that that privatisation works best in developing countries when it is integrated into a broader development framework [*Shin, 1990; Rondinelli and Iacono, 1996: both cited in Craig, 2002*]. Privatisation *can* improve economic performance, but performance improvement relies also on other structural reforms. At the same time, this review of the literature has demonstrated gaps in our knowledge. Industry-level econometric studies involving developing countries have largely centred on the telecommunications sector. There is an urgent need for comparable studies of other sectors in developing countries, notably energy and water, if the lessons for development policy are to be strengthened.

## NOTES

1. For much earlier studies, where the emphasis was on reviewing the comparative performance of public and private enterprises in developing countries, see Cook and Kirkpatrick [1988] and Millward [1988].
2. For example, Brune and Garrett [2000] report that privatisation is promoted by good economic conditions; and D'Souza, Megginson and Nash [2001] based on a sample of 118 firms from 29 countries, find stronger output gains from privatisation in countries with faster growing economies.
3. Panel data includes both cross-sectional (in this case cross-country) and time series statistics. Panel data are analysed using either a random effects or fixed effects model. The random effects model assumes that the random error associated with each cross-section unit is uncorrelated with the other regressors. Where this is not appropriate, the fixed effects model is superior.
4. A measure of debt to equity financing.
5. Wallsten [2000] finds that exclusivity agreements for telecoms in developing countries reduce performance but boost government receipts, suggesting that monopoly rents are shared between private shareholders and government.



6. Indeed, Bortolotti *et al.* [2000: 19] note some accounting write-offs: 'The governments of Argentina and Venezuela assumed debts of US\$930 million and \$471 million respectively, prior to the sale of their telephone companies. In Ghana, the government assumed \$6.3 million in debts and unpaid taxes before divestiture'. Nevertheless, it is not clear whether the data have been adjusted to allow for the accounts restructuring.
7. On water there are two tentative studies by Estache and Rossi [2002] and Estache and Kouassi [2002], but they are far from conclusive. Privatisation was found to have had a favourable impact on the performance of water utilities in Africa but not in Asia.
8. <http://rru.worldbank.org/Resources.asp?results=true&stopicids=35>
9. Shirley and Walsh [2001] in their review of studies on private versus public enterprise also show that the benefits of privatisation are less pronounced where there are monopolies.
10. A number of privatisations in Uganda [Tangri and Mwenda, 2001], Zambia [Craig, 2000], Bukina Faso [Sawadogo, 2000] and Cote D'Ivoire [Wilson, 1994], for example, have involved the transfer of assets to politicians, their families and their associates on preferential terms.

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