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PRIVATISATION IN DEVELOPING COUNTRIES: A REVIEW OF THE EVIDENCE AND THE POLICY LESSONS

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Abstract

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 efficiency remain uncertain.

This paper reviews the main econometric and case study evidence on the impact of privatisation on economic performance in developing economies.

The evidence reviewed 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. The paper also draws lessons for policy in terms of privatisation objectives, institutional capacity, administrative competence and probity and competition and regulatory capability.

INTRODUCTION

Privatisation has been promoted in developing countries 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), the consequences of privatisation within developing countries remain controversial.

The term privatisation has been used to cover an array of different policies. In this paper 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 (for recent reviews of the literature, see Martin and Parker, 1998; Sheshinski and López-Calva, 1999; Megginson and Netter, 2001; Shirley and Walsh, 2001). By contrast, there has been little in the way of recent study focussing on a review of the evidence for developing

countries[1]. This paper endeavours to address this gap in the literature. The empirical evidence for developing countries is composed of econometric work and industry and country case Studies[2]. Section 2 of the paper briefly rehearses the arguments for privatisation and market liberalisation in economic development and looks at the major problems when conducting performance studies. Section 3 considers the econometric evidence; while section 4 reviews the case studies. Section 5 discusses the implications of the evidence for policy and section 6 provides conclusions.

ASSESSING THE EFFECTS OF PRIVATISATION IN DEVELOPING COUNTRIES

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 1990s, 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).

The spread of privatisation in developing countries underlines the need for systematic study of its effects on economic performance. However, assessing the effects is difficult due to a number of methodological problems. Firstly, 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. Secondly, the variables to measure when assessing performance may not be obvious. Privatisation may be found to have improved performance, or not, depending upon 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, e.g. higher employment or lower prices. Thirdly, privatisation can be expected to generate relative

price changes affecting both output and input markets with spillovers 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 modelling is notoriously complex and requires data that usually are not available to the researcher. Also, income redistribution effects may not be straightforward to predict. 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).

Fourthly, 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. For example, Brune and Garrett (2000) report that privatisation is promoted by good economic conditions; Li et al. (2001) (also see Li and Xu, 2002) argue that monopoly state ownership is more likely to be retained where there is high profitability and the fiscal deficit is large; 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. 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). Fifthly, 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.

Lastly, performance may change because of other economic events including structural changes contemporaneous with privatisation, including more macroeconomic stability, fiscal prudence, freer capital movements, promotion of competition and regulatory changes. Separating out the precise effects of privatisation then becomes problematic in the absence of the necessary independent data and model flexibility.

In assessing the impact of privatisation in developing economies broadly two sets of studies exist. One set of studies uses statistical data to undertake an assessment of the effects of

ownership on performance, using a range of performance variables e.g. profitability, productivity, costs of production and financial ratios. In this paper for convenience these studies will be referred to as 'econometric', although not all statistical studies use econometric methods and some merely report descriptive statistics. Econometric studies attempt to model the relationship between dependent and independent variables with a view to measuring the separate effects of each independent variable. In the studies reviewed below 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, 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 can result where data are too heterogeneous and 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. Moreover, case study work is grounded in the experiences of countries and some researchers feel more comfortable when conducting research using 'real people' and 'real organisations' rather than statistics. 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 (e.g. 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.

THE ECONOMETRIC EVIDENCE

There have been a number of econometric studies of the impact of privatisation on economic performance in developing countries. Probably the best known study is the one carried out for the World Bank by Galal, Jones, Tandon and Vogelsang (1992). They 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% 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. They report no case where workers were made significantly worse off by privatisation, and three cases where workers benefited[3]. Their study is therefore cited frequently as confirmation of the merits of its neoliberal agenda. However, the study has some weaknesses. Firstly, 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. Secondly, 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. 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.

Also, both the studies by Megginson et al. (1994) and by D'Souza and Megginson (1999) do not report separate results for developing and developed countries. The same applies to the study by Dewenter and Malatesta (2000) of 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 possible sensitivity of results to the type of performance measures 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. All of these studies use aggregated data from a number of economies and this 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 econometric evidence reviewed is concerned with sectors. Country evidence is reviewed in the consideration of the case studies.

Most sectoral studies involving developing countries have focused on reform in telecommunications. This is because the telecommunications sector has been especially affected by privatisation worldwide. According to Li et al. (2001) roughly 2% of telecommunications firms in 167 countries were privatised in 1980 but by 1998 the number had increased to 42%. 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. Smith and Wellenius (1999), Wellenius (2000) and Noll (2000) set out the potential gains from privatisation of telecoms in developing countries, but econometric evidence on the outcomes was first provided by Ross (1999) and then Wallsten (2001).

The study by Ross is based on data for 110 developed and developing countries between 1986 and 1995 and uses a fixed effects panel data model[4]. The results suggest that where there is at least 50% 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., p.2)[5]. 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.

Hence, 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)[6] decline significantly. 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 an alternative explanation, which they do not consider, 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 privatization, but that a significant fraction of the observed improvement results from regulatory changes – alone or in combination with ownership changes – rather than from privatization alone' (ibid., p.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[7].

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 Bortolloti et al. reveal that in their data set of 31 telecoms firms studied, in only three (Telecom Argentina, Manitoba Telecom Services and New Zealand Telecom) had the government sold its entire stake and in 20 the state retained a majority holding. The average state shareholding sold across their sample was 34.2%. 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.

Moreover, the Bortolloti 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 Bortolloti 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.

Also, like many of the studies reviewed here, Bortolloti 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[8]. 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 Bortolloti 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% 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 to the number of studies of telecommunications privatisations in developing countries, there are far fewer econometric studies of other industries including 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. Probably the utility sector with the most scope for expansion and competition in developing countries, because of existing inadequate supplies, is energy. 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.

A more recent study, by Zhang, Parker and Kirkpatrick (2002), is the first to model the impact of privatising electricity generation in developing countries only, using panel data for 51 economies, between 1985 and 2000. The study confirms that competition increases service penetration, capacity expansion and labour productivity; but the effect of privatisation alone is statistically insignificant except for capacity utilisation. Their results, therefore, complement those of Wallsten for telecommunications. However, there is a clear need for further studies of the electricity sector and for econometric studies of other major industries such as manufacturing and water and sewerage before strong conclusions can be safely drawn[9]. A lack of published 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.

Finally, a brief word on studies that have attempted to assess the relationship between privatisation programmes and growth at the economy-wide level[10]. 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 (e.g. through reduced training and worker health; see Pineda and Rodríguez, 2002). Moreover, in macroeconomic studies causation becomes particularly problematic 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 e.g. 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. 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.

THE CASE STUDY EVIDENCE

The econometric evidence is broadly favourable to privatisation. However, it reveals that other structural reforms, notably introducing more competition and effective state regulation, may be crucial in ensuring that economic performance improves. The case study evidence also suggests that the relationship between privatisation and performance improvement is complex and that performance improvement is not axiomatic. Potentially the case study evidence provides more insight into the social and institutional variables that may make a critical difference to the outcome of privatisation. Where privatisation occurs in low-income countries, 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.

There have been a number of case studies of privatisation in particular developing industries and countries over the last ten years or so and therefore the following review is necessarily selective. The first study to be considered is that by Ramamurti (1997). He looked at the restructuring and privatisation of Ferrocarilla Argentino, the Argentine national passenger and freight railway, and the study finds that labour productivity grew dramatically, by 370%, resulting largely from labour shedding. The enterprise reduced its employment levels by almost 79%, suggesting both large over-manning under state ownership and that the argument in some of the econometric studies reviewed above, that labour does not suffer as a result of privatisation, could be misleading. Ramamurti (1996) has also published on the experiences of four Latin American telecoms privatisations and confirmed large performance improvements (a finding also supported by the studies of Tandon, 1995 and Rogozinski, 1997). In a similar vein, a study of electricity reform in Chile (Estache, Gomez-Lobo and Leipziger, 2000, p.4) found evidence of strong network expansion, particularly benefiting the poor and Bhaskar and Khan (1995) find evidence of a large rise in labour productivity in the privatised jute industry in Bangladesh[11].

Case studies of electricity privatisation in Argentina, Peru, Chile and Brazil, reported in Gray (2001, pp.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% within five years in Argentina’s electricity sector and 25% within 10 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 also suggests that privatisation has brought about benefits for consumers. A number of studies of water and sewerage provision, privatised mainly through concessions, have been similarly favourable to privatisation. In Gabon the first two years of private operation led to a 25% improvement in service continuity and improved billing (Gray, 2001, p.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,p.6). Concessions to private operators are reported to have led to improved services and higher productivity in Buenos Aires, Columbia and Guinea (Gray, 2001, p.9). In Buenos Aires there was a 14% reduction in water tariffs following privatisation (Alcazar, Abdala and Shirley, 2000).

By contrast, a number of the case studies have raised questions about the extent to which the performance improvements identified with privatisation necessarily result. The failure of the private toll-road programme in Mexico, leading to a government bailout costing around US$2.7bn is well documented (Ruster, 1997). Less often cited is the study by Park (1997) of 15 privatised firms in South Korea. This found that after privatisation six firms increased their efficiency but two suffered reductions and performance in the remaining seven did not appear to have been affected. Omran (2001) argues that both privatised and state-owned firms improved their performance in Egypt during the 1990s, with market liberalisation more important than ownership in explaining the result. In other words, the counterfactual to privatisation was probably improved performance. Sampson (1995), studying the impact of banking privatisation in Jamaica, found no conclusive evidence that performance had improved and Bennell's preliminary review of performance changes under privatisation in sub-Saharan Africa concludes 'that no SSA country can be singled out as a very successful privatizer' (Bennell, 1997, p.1800).

Some case study work pinpoints failures in the privatisation process 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. Policy makers in this and other studies (e.g. Saha and Parker, 2002 on Latin America) are revealed to have reform goals that go well beyond the promotion of economic efficiency, to rewarding particular groups in society or

providing political favours or payoffs (also see Commander and Killick, 2000). One intriguing paradox in privatisation 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) provides a particular good case study of 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 luke-warm 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 (also see Ngenda, 1993; Fundanaga and Mwaba, 1997). Meseguer (2002, p.5) comments that in India the privatization of telecommunications was dogged by corruption; while in Mexico the privatization of the banks allowed drug traffickers to buy banks 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). They point to a lack of effective competition in tendering for water contracts, corrupt payments to win concessions and on-going disputes during the contract periods. They also identify examples of continuing public sector financial support to concession holders.

Sachs et al. 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 privatization may have *negative* performance impact' (Sachs, Zinnes and Eilat, 2000, p.39, emphasis in original). Gray (2001) also emphasises the

importance of competition, effective regulation and appropriate fiscal policies by governments in achieving economic performance improvements through privatisation.

In addition to the need for complementary structural reforms, developing countries may have weaknesses 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, p.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., p.91).

Another interesting study is that Gupta and Sravat (1998), they 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%; but analysts believe this may be an under-estimate and losses may be as high as 40%. Attempts to introduce competition into the Brazil power sector have also led to costly disputes (Gray, 2001, p.19).

A number of studies highlight the threat from 'regulatory capture'. For example, Ramamurti, while complementing 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, p.1990). Petrazzini (1996, p.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 which were able to develop effective regulatory regimes to address service and pricing issues (e.g Chile) had much better performance results than those that did not (e.g. 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.

Torp and Rekve (1998, p.78) 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). 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, p.95; for similar critical studies). Greenidge (1997, p.109) after considering the experiences of 27 privatizations in Guyana and pointing to some performance gains, concludes that 'The privatized entities, while perhaps more efficient than their public sector counterparts, have not been able to overcome the environment in which they operate'. He reveals a number of institutional weaknesses. A number of the case studies also point to lower employment and worsened working conditions and more poverty following privatisation (e.g. ILO, 2001; Birdsall and Nellis, 2002; Bayliss, 2002; eds. Posusney and Cook, 2002), something not reflected in the econometric studies.

It is in the context of such insights that we now assess both the econometric and case study evidence and draw lessons for the role of privatisation in economic development.

DISCUSSION

The case study evidence is broadly consistent with the econometric evidence but richer in terms of providing pointers to the circumstances under which privatisations succeed and fail. Both sets of studies suggest that privatisation often leads to performance improvements, in terms of production, productive efficiency, prices and service delivery, while both confirm that privatisation alone may be insufficient to raise economic performance. The econometric evidence points especially to the roles of competition and state regulation in performance improvements after privatisation[12]; while the case studies point to a wider range of institutional issues and the need for capacity building, including improving political, legal, management and financial capability within countries if privatisation is to be successful.

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 and none provides a full general equilibrium model (Galal et al. 1992 come closest but this study is limited in terms of country and industry coverage). The studies vary in terms of the financial and economic performance measures and identify that different measures can lead to widely differing results (while the contrasting results on privatisation's impact on employment between some of the econometric studies and the case study evidence is particularly noticeable). 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. Telecommunications is a fast expanding sector of interest to international investors. Other sectors in developing countries may be less attractive because they offer less scope for profit making.

In spite of the limitations of the studies, however, it is possible to draw lessons for policy and particularly identify why privatisation programmes should proceed with care. The discussion is categorised under four headings, namely privatisation objectives, institutional capacity, administrative competence and probity, and competition and regulatory capability.

Privatisation objectives

Manzetti (1993) reminds us that privatisation could represent a change in the means rather than the ends of development policy. 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 e.g. 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 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. 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 under-perform following the state sell-off.

Leaving aside some comment on the impact on employment and prices, interestingly none of the econometric studies relating to developing countries, reviewed above, has looked directly at the impact of privatisation on poverty. The assumption seems to be that a more efficient use of resources must contribute to raising economic growth and in time, poverty reduction. 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 and increase 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 outcome is not obvious (Kikeri, 1998).

Institutional capacity

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, p.3). In the main, privatisation developed as policy 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 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).

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 privatisation may only be feasible to certain high income groups or families, probably the same elite that controls government (Saha and Parker, 2002)[13]. A number of privatisations in Uganda (Tangri and Mwenda, 2001), Zambia (Craig, 2000), Burkina 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. 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 transnational corporations, who might also introduce useful management skills and sales networks. Cook and Kirkpatrick (1995, p.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, p.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 domestic investors, risks the loss of economies of scale and scope in production. 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. In particular where payments for assets are made in instalments, governments in developing countries appear to be especially 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 on-going, including favouritism when government contracts are placed, continuing protection from competition, and repeated provision of state subsidies – all results highlighted in the above review of the case study evidence.

Administrative competence and probity

Van der Walle (1989) has identified technical constraints including managerial deficiencies, lack of administrative and regulatory capacity and political constraints, including fear of altering the balance of economic, ethnic and political power, as the main reasons for slow or unsuccessful privatisations. The evidence from developed countries confirms that in designing regulatory structures 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 (Avishur, 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, incompetence, corruption and cronyism. The opportunity to use privatisation to earn economic rents is encouraged where there is a lack of investors outside of the political elite. As Commander and Killick (2000, p.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.

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.

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
Relatively high standards of probity in public administration	Relatively low standards of public administration, including cronyism and corruption

Competition and regulatory capability

The studies reviewed have highlighted the importance of both effective competition and state regulation[14]. 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, p.1476).

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 competition and regulatory measures which 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 transnational companies, other important actors are introduced that can either promote or oppose structural reforms in pursuit of their own rents.

CONCLUSIONS

This paper has surveyed the empirical literature on the impact of privatisation on economic performance in developing countries, considering both the econometric and case study evidence. The results suggest that policy should focus on the following changes involving capacity building if privatisation is not to disappoint. Firstly, the privatisation objectives need to be articulated to include not only improved economic efficiency (e,g. higher productivity) but poverty reduction and long-term economic development. Secondly, 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. Thirdly, 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 capability. At present few developing countries have effective competition authorities and regulatory capacity is low.

The empirical evidence in this paper 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] In reviewing the evidence it is important to consider both econometric and case studies. The result, however, is that a large number of studies qualify to be discussed. For reasons of space, the paper cannot be entirely comprehensive, although the studies reviewed are chosen to provide a reasonably representative cross-section of the evidence.
[3] By contrast, a later study of Mexico's privatisations by Porta and López-de-Silanes (1999) found that the resulting higher performance (measured as operating income to sales) was due in part to income transfers from workers (31%), as well as to higher prices (5%) and higher productivity (64%).
[4] 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.
[5] In a further paper Wallsten (2000) finds that granting newly privatised firms exclusivity periods free from competition raises the sale receipts to government but seriously reduces investment in telecom networks.
[6] A measure of debt to equity financing.
[7] Other papers by Wallsten (2000a, 2000b) are also consistent with the notion that competition is important. They find 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.
[8] Indeed, Bortolloti et al. note (2000, p.19) some accounting write-offs: 'The governments of Argentina and Venezuela assumed debts of $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.
[9] 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.
[10] Megginson and Netter (2001) report some studies of Chinese economic performance to support their conclusion that privatisation improves economic performance. Since there have been very few true privatisations in China, with the state normally retaining shares and influence, they are not discussed here. It is not straightforward to interpret the Chinese evidence as supportive of full privatisation.
[11] Correctly this is a statistical study rather than a case study but fits more neatly into this section of the paper.
[12] This conclusion is consistent with research on privatisation in developed economies, which also emphasises the roles of competition and state regulation (e.g. Vickers and Yarrow, 1988; Martin and Parker, 1998).
[13] 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.
[14] 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.

References

Adams, C., Cavendish, W. and Mistry, P.S. (1992) *Adjusting Privatization: Case Studies from Developing Countries*, London: James Currey.

Alcazar, L., Abdala, M.A. and Shirley, M.M. (2000) 'The Buenos Aires Water Concession', *Policy Research Working Paper 2311*, Washington, DC: World Bank.

Avishur, A. (2000) 'A Positive Theory of Privatization', *Journal of Applied Economics*, vol.111, no.1, pp.1-55.

Barnett, S. (2000) 'Evidence on the Fiscal and Macroeconomic Impact of Privatisation', *IMF Working Paper*, Washington, DC: International Monetary Fund.

Bayliss, K. (2002) 'Privatization and Poverty: The Distributional Impact of Utility Privatization', *Annals of Public and Cooperative Economics*, vol.73, no.4b, pp.603-625.

Bennell, P. (1997) 'Privatization in Sub-Saharan Africa: Progress and Prospects during the 1990s', *World Development*, vol.25, no.11, pp.1785-1803.

Bhaskar, V. and Khan, M. (1995) 'Privatization and Employment: A Study of the Jute Industry in Bangladesh', *American Economic Review*, vol.85, no.1, pp.267-273.

Birdsall, N. and Nellis, J. (2002) 'Winners and Losers: Assessing the distributional impact of privatization', *Working Paper No.6*, Washington, DC.: Centre for Global Development.

Blackman, A. and Harrington, W. (2000) 'The Use of Economic Incentives in Developing Countries: Lessons from International Experience with Industrial Air Pollution, *Journal of Environment & Development*, vol.9, no.1, pp.5-44.

Bortolotti, B., Fantini, M. and Siniscalco, D. (1999) 'Regulation and Privatisation: The Case of Electricity', *Working Paper*, Milan: FEEM.

Bortolotti, B., D'Souza, J., Fantini, M. and Megginson, W.L. (2002) 'Privatization and the Sources of Performance Improvement in the Global Telecommunications Industry', *Telecommunications Policy*, vol.26, pp.243-268.

Boubakri, N. and Cosset, J.-C. (1998) 'The Financial and Operating Performance of Newly Privatized Firms: Evidence from Developing Countries', *Journal of Finance*, vol.53, no.3, pp.1081-1110.

Boycko, M., Shleifer, A. and Vishny, R.W. (1996) 'A Theory of Privatisation', *Economic Journal*, vol.106, March, pp.309-319.

Brownbridge, M. and Kirkpatrick, C (2002) Policy Symposium: Financial Regulation and Supervision in Developing Countries; *Development Policy Review*, Volume 20, Number 3, July 2002.

Brune, N. and Garrett, G. (2000) 'The Diffusion of Privatization in the Developing World', mimeo, Yale University.

Buchanan, J.M. (1972) *Theory of Public Choice*, Michigan: University of Michigan Press.

Collier, P. and Dollar, D. (1998) 'Aid Allocation and Poverty Reduction', mimeo, DRG, World Bank.

Commander, S. and Killick, T. (2000) 'Privatisation in Developing Countries: A Survey of the Issues', in (eds.) P. Cook and C. Kirkpatrick, *International Library of Comparative Public Policy*, vol.13, part 1, pp.120-53.

Cook, P. (1999) 'Privatization and Utility Regulation in Developing Countries: The Lessons So Far', *Annals of Public and Cooperative Economics*, vol.70, no.4, pp.549-587.

Cook, P. and Kirkpatrick, C. (1988) 'Privatisation in Less Developed Countries An Overview', in (eds.) P. Cook and C. Kirkpatrick, *Privatisation in Less Developed Countries*, London: Harvester Wheatsheaf.

Cook, P. and Kirkpatrick, C. (1995) 'Privatisation Policy and Performance', in (eds.) P. Cook and C. Kirkpatrick, *Privatisation Policy and Performance: International Perspectives*, London: Prentice Hall and Harvester/Wheatsheaf.

Cook, P. and Uchida, Y. (2002) 'Privatisation and Economic Growth in Developing Countries', mimeo., Centre on Regulation and Competition, Institute for Development Policy and Management, University of Manchester.

Craig, J. (2000) 'Evaluating Privatisation in Zambia: A tale of two processes', *Review of African Political Economy*, vol.27, no.85, pp.357-66.

Craig, J. (2002) 'Privatisation and Indigenous Ownership: Evidence from Africa', *Annals of Public and Cooperative Economics*, vol.73, no.4, pp.559-576.

D'Souza, J. and Megginson, W.L. (1999) 'The Financial and Operating Performance of Privatized Firms During the 1990s', *Journal of Finance*, vol.54, pp.1397-1438.

D'Souza, J., Megginson, W. and Nas, R. (2001) 'Determinants of Performance Improvements in Privatized Firms: The Role of Restructuring and Corporate Governance', mimeo, University of Oklahoma.

Davis, J., Ossowski, R., Richardson, T. and Barnett, S. (2000) 'Fiscal and Macroeconomic Impact of Privatization', *Occasional Paper 194,* Washington, DC: International Monetary Fund.

DeCastro, J.O. and Uhlenbruck, K. (1997) 'Characteristics of Privatization: Evidence from developed, less-developed and former communist countries', *Journal of International Business Studies*, vol.28, pp.123-143.

Dewenter, K.L. and Malatesta, P.H. (2001) 'State-Owned and Privately Owned Firms: An Empirical Analysis of Profitability, Leverage and Labor Intensity', *American Economic Review*, vol.91, no.1, pp.320-334.

Dijk van, M.P. and Nordholt, N.G.S. (1993) 'Introduction: Privatisation in Developing Countries, how to Assess?', *Siswo Publikatie*, no.384, pp.7-16. (Proceedings of a World Bank/IMF sponsored symposium on Privatisation Experiences in African and Asian countries, Netherlands, June 1993.)

Djankov, S. and Murrel, P. (2000) 'Enterprise Restructuring in Transition: A Quantitative Survey', mimeo, Washington, DC: World Bank.

Duckett, J. (2001) 'Bureaucrats in Business, Chinese Style: The Lessons of Market Reform and State Entrepreneurialism in the People's Republic of China', *World Development*, vol.29, no.1, pp.23-37.

Dharwadkar, R., George, G. and Brandes, P. (2000) 'Privatization in Emerging Economies: An Agency Theory Perspective', *Academy of Management Review*, vol. 25, no.3, pp.650-689.

Estache, A., Gomez-Lobo and Leipziger, D. (2000) 'Utility Privatization and the Needs of the Poor in Latin America. Have We Learned Enough to Get it Right?, *World Bank Policy Research Working Paper 2407*, Washington DC: World Bank.

Estache, A. and Kouassi, E. (2002) 'Sector Organization, Governance and the Inefficiency of African Water Utilities', mimeo.

Estache, A. and Rossi, M.A. (2002) 'How Different is the Efficiency of Public and Private Water Companies in Asia', *World Bank Economic Review*, vol.16, no.1, pp.139-148.

Fernandez, J.E., De Cea, J. and Fernandez, J.M. (1999) 'Port Privatization in Developing Countries: The Case of Container Terminals', *International Journal of Transport Economics*, vol.26, no.2, pp.293-314.

Filatotchev, I. (2003) 'Privatization and Corporate Governance in Transition Economies: theory and concepts', in (eds.) D. Parker and D.Saal, *International Handbook on Privatization*, Cheltenham: Edward Elgar.

Findlay, R. (1990) 'The new political economy: its explanatory power for LDCs', *Economics and Politics*, vol.2, no.2, pp.193-221.

Fink, C., Mattoo, A. and Rathindran, R. (2002) 'An Assessment of Telecommunications Reform in Developing Countries', *World Bank Policy Research Working Paper 2909*, Washington, DC: World Bank.

Frydman, R., Gray, C., Hessel, M. and Rapaczynski, A. (1999) 'When Does Privatization Work? The Impact of Private Ownership on Corporate Performance in the Transition Economies', *Quarterly Journal of Economics*, vol.114, pp.1153-1191.

Fundanaga, C. and Mwaba, A. (1997) *Privatization of Public Enterprises in Zambia: An Evaluation of Policies, Procedures and Experiences*, Economic Research Paper no.35, African Development Bank.

Galal, A. and Nauriyal, B. (1995) *Regulating Telecommunications in Developing Countries*, World Bank Policy Research Working Paper no.1520.

Glade, W. (1989) ‘Privatization in Rent-Seeking Societies’, *World Development*, vol.17, no.5, pp.633-641.

Gray, P. (2001) ‘Private Participation in Infrastructure: A Review of the Evidence’, mimeo, Private Provision of Public Services Group, Private Sector Advisory Services, Washington, DC: World Bank.

Greenidge, C. (1997) ‘A Case of the Curate’s Egg: The Political Economy of Privatization in Guyana’, in (ed.) A. Bennett, *How Does Privatization Work? Essays on Privatization in Honour of Professor V.V. Ramanadham*, London: Routledge.

Gupta, J.P. and Sravat, A.K. (1998) ‘Development and Project Financing of Private Power Projects in Developing Countries: a case study of India’, *International Journal of Project Management*, vol.16, no.2, pp.99-105.

Gutierrez, L.H. and Berg, S. (2000) ‘Telecommunications liberalization and regulatory governance: lessons from Latin America’, *Telecommunications Policy*, vol.24, pp.865-884.

Handley, P. (1997) ‘A Critical Review of the Build-Operate-Transfer Privatisation Process in Asia’, *Asian Journal of Public Administration*, vol.19, no.2, pp.203-43.

Heald, D. (1990) ‘The Relevance of Privatization to Developing Countries’, *Public Administration and Development*, vol.10, no.1, pp.3-18.

ILO (2001) ‘Privatization and restructuring: The impact on employment and human resource development’, in *Managing the Privatization and Restructuring of Public Utilities (Water, Gas, Electricity)*, Geneva: International Labour Organisation.

Kikeri, S. (1998) ‘Privatization and Labor: What Happens to Workers When Governments Divest?’, *World Bank Technical Paper No.396*, Washington, DC: World Bank.

Kikeri, S. and Nellis, J. (2001) ‘Privatisation in Competitive Sectors: The Record so Far’, mimeo, Private Sector Advisory Services, Washington DC.: World Bank.

Killick, T. and Commander, S. (1988) ‘State divestiture as a policy instrument in developing countries’, World Development, vol.16, no.12, pp.1465-1479.

Lalor, P. and Gaqrcia, H. (1996) ‘Reshaping Power Markets – Lessons from Chile and Argentina’, *Public Policy for the Private Sector*, Note no. 85, Washington DC.: World Bank.

Li, W. and Xu, L.C. (2002) 'The Political Economy of Privatization and Competition: Cross-Country Evidence from the Telecommunications Sector', *Journal of Comparative Economics*, vol.30, pp.439-462.

Li, W., Qiang, C. Z-W. and Xu, L.C. (2001) 'The Political Economy of Privatization and Competition: Cross-Country Evidence from the Telecommunications Sector', Development Research Group mimeo, Washington DC.: World Bank.

Makonnen, D. (1999) *Broadening Local Participation in Privatization of Public Assets in Africa*, Addis Ababa: United Nations Economic Commission for Africa, Economic and Social Policy Division.

Manzetti, L. (1993) 'The Political Economy of Privatization through Divestiture in Lesser Developed Economies', *Comparative Politics*, vol.25, no.4, pp.429-54.

Manzetti, L. (1999) *Privatization South America Style*, Oxford: Oxford University Press.

Martin, S. and Parker, D. (1997) *The Impact of Privatisation: Ownership and corporate performance in the UK*, London: Routledge.

Megginson, W.L., Nash, R.C. and van Randenborgh, M. (1994) 'The Financial and Operating Performance of Newly Privatized Firms: an International Empirical Analysis', *Journal of Finance*, vol.49, no.2, pp.403-452.

Megginson, W.L. and Netter, J.M. (2001) 'From State to Market: A Survey of Empirical Studies on Privatization', *Journal of Economic Literature*, 39, 321-389.

Meseguer, C. (2002) 'The Diffusion of Privatization in Industrial and Latin American Countries: What Role for Learning?', mimeo, Juan March Institute, Madrid.

Millward, R. (1988) 'Measured Sources of Inefficiency in the Performance of Public and Private Enterprises in LDCs', in (eds.) P. Cook and C. Kirkpatrick, *Privatisation in Less Developed Countries*, London: Harvester Wheatsheaf.

Murtha, T.P. and Lenway, S.A. (1994) 'Country capabilities and the strategic state: how national policy institutions affect multinational corporations' strategies', *Strategic Management Journal*, vol.15, summer, pp.113-130.

Ngenda, B. (1993) 'Privatisation in Zambia', *International Business Lawyer*, June, pp.298-301.

Niskanen., W.A.Jr. (1971) *Bureaucracy and Representative Government*, Chicago: Aldine.

Noll, R. (2000) *Telecommunications Reform in Developing Countries*, Stanford Institute for Economic Policy Research Discussion Paper no. 99-31, Stanford University.

Omran, M. (2001) 'Detecting the Performance Consequences of Privatizing Egyptian State-Owned Enterprises: Does Ownership Structure Really Matter?', Mimeo.

Park, Y. (1997) 'Privatization and employment in the Republic of Korea', in (eds.) R. Van der Hoeven and G. Sziraczki, *Lessons from Privatization: Labor Issues in Developing Countries*, Geneva: International Labour Office.

Parker, D. (2002), 'Economic Regulation: A Review of Issues', *Annals of Public and Cooperative Economics*, 73 (4).

Petrazzini, B. (1996) 'Telephone Privatisation in a Hurry: Argentina', in (ed.) R. Picciotto, S. (1999) 'Introduction: What Rules for the World Economy?', in (eds.) S. Picciotto and R. Mayne, *Regulating International Business – Beyond Liberalization*, London: Macmillan.

Petrazzini, D. and Clark, T.H. (1996) 'Costs and Benefits of Telecommunications Liberalization in Developing Countries', *Working Paper*, Hong Kong: Hong Kong University of Science and Technology.

Picciotto, S. (1999) 'Introduction: What Rules for the World Economy?', in (eds.) S. Picciotto and R. Mayne, *Regulating International Business: Beyond Liberalization*, London: Macmillan.

Pineda, J. and Rodríguez, F. (2002) 'Labor and the Politics of Human Capital Accumulation', in (eds.) Posusney, M.P. and Cook, L.J., *Privatization and Labor: Responses and Consequences in Global Perspective*, Cheltenham: Edward Elgar.

Pitcher, M.A. (1996) 'Recreating Colonialism or Reconstructing the State? Privatisation and Politics in Mozambique', *Journal of Southern African Studies*, vol.22, no.1, pp. 49-74.

Plane, P. (1997) 'Privatisation and economic growth: an empirical investigation from a sample of developing market economies', *Applied Economics*, vol.29, pp.161-178.

Plane, P. (1999) 'Privatization, Technical Efficiency and Welfare Consequences: The Case of the Cote d'Ivoire Electricity Company (CIE)', *World Development*, vol.27, pp.343-360.

Pollitt, M.G. (1997) 'The Impact of Liberalization on the Performance of the Electricity Supply Industry', *Journal of Energy Literature*, vol.3, pp.3-31.

Porta, R.L. and López-de-Silanes, F. (1999) 'The Benefits of Privatization: Evidence from Mexico', *Quarterly Journal of Economics*, vol.114, no.4, pp.1193-1242.

Posusney, M.P. and Cook, L.J. (eds) (2002) *Privatization and Labor: Responses and Consequences in Global Perspective*, Cheltenham: Edward Elgar.

Private Finance International (2001) 'Light Dims in Indian Power', *Asia Pacific Review*, July, pp.9-13.

Ramamurti, R. (ed.) (1996) *Privatizing Monopolies: Lessons from the Telecommunications and Transport Sectors in Latin America*, Baltimore: Johns Hopkins University Press.

Ramamurti, R. (1997) 'Testing the Limits of Privatization: Argentine Railroads', *World Development*, vol.25, no.12, pp.1973-1993.

Rohdewohld, R. (1993) 'Deregulating the Public Sector: Privatisation and Commercialisation in Nigeria', *Annales de l'économie publique sociale et cooperative*, vol.64, no.4, pp.501-30.

Rogozinski, J. (1997) *La Privatización en México: Razones e Impactos*, Mexico: Ed. Trillas.

Rondinelli, D. and Iacono, M. (1996) 'Strategic Management of Privatization: A Framework for Planning and Implementation', *Public Administration and Development*, vol.16, pp.247-63.

Ros, A.J. (1999) 'Does ownership or competition matter? The effects of telecommunications reform on network expansion and efficiency', *Journal of Regulatory Economics*, vol.15, pp.65-92.

Ros, A.J. and Banerjee, A. (2000) 'Telecommunications privatization and tariff rebalancing: evidence from Latin America', *Telecommunications Policy*, vol.24, pp.233-252.

Ruster, J. (1997) 'A Retrospective on the Mexican Toll Road Program (1989-1994)', *Public Policy for the Private Sector: Note No.146'*, Washington DC: World Bank.

Sachs, J., Zinnes, C. and Eilat, Y. (2000) 'The Gains from Privatization in Transition Economies: Is "Change of Ownership" Enough?', CAER II Discussion Paper 63, Cambridge, Mass.: Harvard Institute for International Development.

Saha, S. and Parker, D. (eds.) (2002) *Globalisation and Sustainable Development in Latin America: Perspectives on the New Economic Order*, Cheltenham: Edward Elgar.

Sampson, C.I. (1995) 'Privatizing Banking Services in Jamaica', in (ed.) J. Prokopenko, *Management for Privatization: Lessons from Industry and Public Service*, Management Development Series 32, Geneva: International Labour Office.

Sappington, D.E. and Stiglitz, J.E. (1987) 'Privatization, Information and Incentives', *Journal of Policy Analysis & Management*, vol.6, no.4, pp.567-82.

Sawadogo, J. (2000) 'Burkina: Privatisation's Rocky Road', *Africa Recovery Online*, vol.14, no.1.

Shapiro, C. and Willig, R.D. (1990) 'Economic Rationales for the Scope of Privatization', in E.N. Suleiman and J. Waterbury, *The Political Economy of Public Sector Reform and Privatization*, Boulder CO: Westview Press; also reprinted in D. Parker ed. (2001) *Privatisation and Corporate Performance*, Cheltenham: Edward Elgar.

Sheshinski, E. and López-Calva, L.F. (1999) 'Privatization and Its Benefits: Theory and Evidence', *Development Discussion Paper No.698*, Cambridge, Mass.: Harvard Institute for International Development, Harvard University.

Shin, R. (1990) 'The Paradox of Privatization as a Public-Policy Instrument: The Case of Korean Commercial Banks', *International Review of Administrative Science*, vol.56, pp.79-88.

Shirley, M.M. and Walsh, P. (2001) 'Public versus Private Ownership: The Current State of the Debate', mimeo, Washington, DC: World Bank.

Smith, P.L. and Wellenius, B. (1999) 'Migrating Regulatory Risk in Telecommunications', *Public Policy for the Private Sector*, no.189, Washington, DC: World Bank.

Stjernfalt, J. (2000) *Obstacles and Constraints in the Ghanaian Privatisation Process*, Lund: Minor Field Studies no. 113, Department of Economics, University of Lund.

Tandon, P. (1995) 'Welfare Effects of Privatization: Some Evidence from Mexico', *Boston University International Law Journal*, vol.13, pp.329-349.

Tangri, R. and Mwenda, A. (2001) 'Corruption and Cronyism in Uganda's Privatization in the 1990s', *African Affairs*, no.100, pp.117-33.

Torp, J.E. and Rekve, P. (1998) 'Privatisation in Developing Countries: Lessons to be Learnt from the Mozambican Case', *Transformation*, no.36, pp.73-92.

Trujillo, L. and Nombela, G. (2000) 'Privatization and Regulation in Transport Infrastructures: Guidelines for Policy Makers and Regulators', mimeo, Economic Development Institute, Washington, DC; World Bank.

Tukahebwa, G. (1998) 'Privatization as a Development Policy', in (eds.) H. Hansen and M. Twaddle, *Developing Uganda*, Oxford: James Currey.

UNCTAD (1995) *Comparative Experiences with Privatization: Policy Insights and Lessons Learned*, New York, United Nations Conference on Trade and Development, United Nations.

University of Greenwich, Public services International Research Unit (2001), http://www.psiru.org/reportsindex.htm

Van der Walle, N. (1989) 'Privatization in Developing Countries: A Review of the Issues', *World Development*, vol.17, no.5, pp.601-15.

Vickers, J. and Yarrow, G. (1988), *Privatization: An Economic Analysis*, London-Cambridge MA, The MIT Press.

Wallsten, S.J. (2000) 'Telecommunications Privatization in Developing Countries: The Real Effects of Exclusivity Periods', mimeo, Stanford University and the World Bank.

Wallsten, S.J. (2001) 'An Econometric Analysis of Telecom Competition, Privatization and Regulation in Africa and Latin America', *Journal of Industrial Economics*, vol.XLIX, no.1, pp.1-19.

White, O. and Bhatia, A. (1998) *Privatization in Africa*, Washington DC.: World Bank.

Wilson, E. (1994) ‘The Political Economy of Economic Reform in Cote d’Ivoire: A Micro Study of Three Privatization Transactions’, in (eds.) B. Grosh and R.S. Mukandala, *State-Owned Enterprises in Africa*, Boulder: Lynne Reinner.

World Bank (1995) *Bureaucrats in Business: The Economics and Politics of Government Ownership*, Oxford: Oxford University Press for the World Bank.

Yotopoulos, P.A. (1989) ‘The (Rip)Tide of Privatization: Lessons from Chile’, *World Development*, vol.17, no.5, pp.683-702.

Zhang, Y.-F., Parker, D. and Kirkpatrick, C. (2002) ‘Electricity Sector Reform in Developing Countries: An Econometric Assessment of the Effects of Privatisation, Competition and Regulation’, *Working Paper No.31*, Centre on Regulation and Competition, Institute for Development Policy and Management, University of Manchester.