

Regulatory Issues and Privatization

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Abstract

The privatization of state-owned telecommunication companies (SOTEs) began in Asia in Japan in the 1980s and gathered pace during the 1990s. This paper starts by reviewing the scope of meanings for the term 'privatization' and then examines the reasons, aims and results of privatization, noting that they do not necessarily equate with one another. Econometric and non-econometric findings are reviewed and then some lessons and guidelines to good practice are drawn. The paper concludes with various perspectives on effective policy-making.

Introduction

The reasons, aims and results of policy making often do not equate with one another. Reasons reflect current economic and political priorities of the state, while aims reflect outcomes that are often idealized for current political consumption, whereas results reflect the harsh realities of the times. This is just as true for policies of privatization as for any other. Section One of this paper briefly looks at the various meanings of the term 'privatization'. Section Two looks at the reasons, aims and outcomes in more detail, drawing some lessons that lead into Section Three which considers some of the key issues in designing the privatization process. Section Four concludes with various perspectives on effective policy-making.

1. Privatization

The term 'privatization' can have several different meanings and can be achieved in different ways.¹ In its most emphatic guise it refers to a 100 per cent transfer of ownership through the sale of a state-owned enterprise (SOE) to private sector equity holders as a publicly listed company. This is usually done by means of a share issue privatization (SIP) or initial price offering (IPO). The International Finance Corporation (IFC)² lists numerous techniques of ownership transfer including public offer, closed subscription, joint venture, liquidation, concessions, auctions, voucher or certificate based transfers, employee or management buyouts, and combinations of these. Megginson and Netter (2001) provide a similar review, adding that in the USA state outsourcing is also sometimes termed 'privatization'. This much broader definition implies any mechanism

¹ See also Ure and Araya Vivorakij (1997)

² The International Finance Corporation (IFC, 1995) states 'A generous stance would admit any transfer of ownership or control from public to private sector. A more exacting definition would require that the transfer be enough to give the private operators substantive independent power.'

through which private sector capital can participate in the telecommunications business. (See Appendix for a review of current levels of capitalization of the major telecom companies in Asia.)

The following bullet points work backwards through these various mechanisms for bringing private capital into the sector.³

Mechanisms for Privatization

- **Employee and Management Buyouts** - are not usually practical for large undertakings of strategic importance such as telecommunication enterprises, although employee share-ownership schemes can be part of a negotiated stakeholder agreement to win the backing of labour unions, and management share-ownership and stock options can become part of an incentive scheme designed to drive growth.
- **Auctions** - have been used to sell state-owned telecommunications enterprises (SOTE) to domestic and foreign bidders where the state wants to raise large stakes and also wants to ensure, through vetting and pre-selection, that the bidders are competent investors with telecommunications management skills. For example, in 1990 New Zealand Telecom was auctioned to Bell Atlantic (USA) and Ameritech (USA) for NZ\$4.25 billion.
- **Voucher and Certificate Based Transfers** - have been used in Eastern Europe to allocate shares to local citizens, but the procedures can be dangerously lacking in transparency.
- **The Concession Method** - was used in 1981 when Macau awarded a twenty-year Build-Operate-Transfer (BOT) contract to Companhia de Telecomunications (CTM), a joint venture involving CPRM of Portugal and led by the Cable & Wireless company. Under this arrangement remaining asset values are transferred to the Macau Government only at the end of the Concession period. After negotiations in the mid-1990s the franchise was extended for a further ten years but the cellular and Internet markets were opened to competition. By contrast in 1992 Thailand used the Build-Transfer-Operate (BTO) model to grant two revenue-sharing Concessions.⁴ Now that both the Communications Authority of Thailand (CAT) and the Telephone Organization of Thailand (TOT) are scheduled for SIP privatization these schemes are being reconsidered because the JV partners are concerned that through revenue-sharing they will be subsidizing a direct competitor.
- **Liquidation** - the most spectacular recent cases of liquidation have arisen in the private sector in the USA as companies like Worldcom, Global Crossing, 360 Networks and others have either sought protection under Chapter 11 or have passed

³ For a background account of these early experiments with private capital, see Ure (1995; 1997)

⁴ BTOs were awarded to TelecomAsia, a joint venture between Charoen Pokphand and Nynex of the USA, and TT&T, a joint venture between two Thai companies Loxley and Jasmine. The Thai Constitution prohibits the private ownership of national infrastructure.

into receivership. Restrictions are sometimes placed upon who can buy these assets, often for national security reasons.⁵

- **Joint Ventures** - (JVs) between foreign-owned telecommunications companies and local state-owned telecommunications enterprises (SOTEs) became popular in Asia in the 1990s but most have collapsed since then. PT Telekom in Indonesia experimented with the KOS joint venture scheme under which the foreign partner in each province was required to employ PT Telekom staff, but the Asian economic crisis undermined the commercial viability of these schemes. PT Telekom has since adopted the more conventional road to privatization.
- **Near Joint Ventures** - in 1988 Vietnam adopted something less than a joint venture when a Business Cooperation Contract (BCC) arrangement was started with Telstra, based upon payments from revenues. Mobile operator China Unicom experimented with China-China-Foreign (CCF or 'Zhong-Zhong-Wai' in Chinese) partnerships in the mid-1990s. Operating revenues were shared with the local China partner who in turn shared revenues with their foreign partner in exchange for management, technology and network consultancy services. When the State Council upheld the directive of the Ministry of Posts & Telecommunications that installation fees must be excluded from revenue-sharing agreements and instead be ploughed back into network investment, the foreign partners no longer found these CCFs to be commercially viable.⁶
- **Public Offer and Closed Subscriptions** - IPOs and private placements are the most frequently used mechanisms for the privatization of SOTEs, partly because the state is looking for a windfall income, but also because of the sheer size of the holdings and because of the strategic importance of the sector. Often the state will retain part or the majority of shares, releasing them in tranches according to the market price and the ability of the market to absorb them
- **Outsourcing** - from 1989 Indonesia experimented with the Pola Bagi Hasil (PBH) model that allowed domestic private capital to revenue share as building contractors and consultants to PT Telekom, an arrangement known as the Build-Transfer (BT) model, an early form of outsourcing.

⁵ Privately-owned Hutchison Global Communications, the Hong Kong telecommunications company, was recently denied permission to buy a stake in Global Crossing in the USA because of concerns about its close links with China, but partially state-owned Singapore Telecom was given the go-ahead. On the other hand, SingTel was rebuffed in its efforts to buy Hongkong Telecom and buy into Time Telekom in Malaysia, while its efforts to purchase Optus from Cable & Wireless in Australia faced a similar uphill battle before clearance was finally given.

⁶ The dispute illustrates a wider issue, that various forms and degrees of involvement of 'outside capital', which could be domestic or foreign investment, run up against objections from different interest groups and stakeholders within the telecommunications establishment, sometimes from the incumbent operator, sometimes from the regulator, sometimes from policy makers and politicians.

2. Reasons, Aims and Results of Privatization

2.1 Reasons

What are the economic and political reasons and priorities in the case of telecommunications privatization? Very often the economic reason is to plug a gap in state finances by ‘selling off the family silver’⁷ but there are others. Here is a short list.

Some Economic Reasons

- Improved state finances - one of the factors at work in Malaysia in the early 1980s and in India in the 2000s.⁸
- Cut state subsidies and the costs of administration by making the PTT⁹ service more commercial- China has undergone significant cost restructuring since the state divested its share holdings in China Telecommunications.
- Promote the local capital market - a goal of both the Malaysian and Singaporean governments when Telekom Malaysia and SingTel were privatized.
- Meet trade and investment commitments - all signatories to the WTO Basic Agreement on Telecommunications have accepted certain obligations.
- Promote economic growth in a key industrial sector - an emphasis on technological development was high on the agenda in Malaysia’s *Vision 2020*.

The political reason may be public protest at the poor level and high cost of service provision. Again, here is a short list.

Some Political Reasons

- Protests from residents or business user groups - the Hong Kong Telecom Users’ Group (HKTUG) was an importance lobby on Government to end the monopoly of Hongkong Telecom and open the market.
- Pressure from trading partners and world and regional trade organizations - both Japan and South Korea came under sustained pressure from the USA during the 1990s to open their telecommunication markets.
- Pressure from local private business groups who want to enter the market - this is almost universally the case where there are profits to be made.
- Promote important domestic constituencies - radio spectrum has been reserved in the USA for minority groups; Malaysia’s ‘Bumiputeras’ policy was designed to promote commercial participation by the indigenous population.
- Free market ideology - a strong factor in Mrs Thatcher’s Britain and President Reagan’s USA (‘Reaganomics’) in the 1980s.

There can be significant counter-pressures, notably from consumer groups who fear that tariff rebalancing and the end of subsidies will push up local tariffs, from labour unions

⁷ As Sir Harold Macmillan, British Prime Minister in the early 1970s, called Mrs Margaret Thatcher’s wholesale programme of privatizations in the 1980s.

⁸ Jabatan Telekom Malaysia (JTM) had M\$4.6 billion long term debt by 1986 and total capital expenditure of M\$5.5 billion against revenue of M\$5 billion. Mansor in Brody et al. (1992) p.61

⁹ PTT stands for Posts, Telegraph and Telephone indicating the genealogy of the sector.

who fear job losses, and from Leftwing or nationalist political parties who fear a loss of public control over the social obligations of telecom companies, the loss of national sovereignty and the loss of national industry standards setting. These pressures can easily delay the process of privatization, and almost certainly require negotiation and compromises.

The Issues

- **Tariff rebalancing** - a delay to rebalancing will seriously skew the economics of market entry as new entrants are attracted to the higher-tariff international and domestic long distance markets, leaving the local loop uncompetitive and without new investment. A universal service fund into which new entrants contribute according to their share of long distance traffic revenues would be one rather heavy-handed way to ensure some investment in the customer access network, but an unsatisfactory one since a USF is designed to meet uneconomic social obligations while unbalanced tariffs subsidize what should be profitable markets.
- **Job Loss** - would seem to be almost inevitable in the incumbent, although new entrants will create jobs. Spinning off subsidiary companies to take up the excess labour and then outsourcing certain tasks to them, such as ducting and maintenance work or security work, is one possibility. PCCW-HKT has used this in Hong Kong and NTT did the same in Japan. PT Telekom in Indonesia required its joint venture partners in the 1990s to employ its surplus staff. Otherwise telecom companies, being given a commercial status as separate corporate entities, have to negotiate redundancy packages, pension-right guarantees, and so on, and this requires cost restructuring. The new China Telecom (CT) and China Netcom Corporation (CNC) have been going through this exercise since 2002, having to show on their books for the first time the true cost of staff benefits, costs that have to be covered by their operating revenues.
- **Social Obligations** - the old PTT monopoly state-owned telecoms enterprise (SOTE) model failed to meet universal service obligations. The cross-subsidy model seemed to have a future as long as there was (a) a steady expansion of the basic network generating revenue from (i) installation charges, (ii) monthly access charges and (iii) usage charges, and (b) there were profitable and growing long distance and international markets. High installation and access charges had rationing as their economic logic. A small network is easily congested which reduces the value of being on it, but as network capacity expands it makes better economic logic to reduce access charges and push up usage charges. As countries begin to move up from low-income to middle-income and networks expand, that is what tends to happen. But, as telephone networks go digital, the scope of available services increases and the means of by-pass of official tariff structures appear. There is an incentive for the new middle and business classes to lower their costs, to look for specialist providers who can cater to their specific needs, such as mobile operators, callback and value-added service providers (VAS) and Internet Service Providers (ISPs) who can offer cheaper ways - such as short message services (SMS), instant messaging services (IMS), voice-over-Internet or VoIP and least-cost routing - to make long distance calls. Under these pressures the old cross-subsidy model begins to break down. A new

model is required, and the most popular one is setting up a universal service fund (USF) into which all new entrants make a contribution. An alternative is to auction off the universal service obligation (USO) to a new entrant as Chile has done, or to require new entrants to invest in rural as well as urban areas as in the Philippines.

- **National Sovereignty** - the problem here arises partly because of a traditional and indeed atavistic holding onto the idea that telecommunications as infrastructure is a national asset that must not fall into foreign ownership, partly because of national security issues or political reasons masquerading as security issues, and partly because an economy may be trying to develop its own national standards and technologies. The first argument overlooks the reality that (a) the national asset can grow far more quickly if it is open to direct investment from beyond the state, whether to domestic or foreign capital, that (b) diversity of networks reduces national vulnerability to a single network failure and offers far more choice, and that (c) choice is a good way to attract foreign investment in other sectors of the economy. The second argument is less easily disposed of, but is probably exaggerated and misused if it is used to exclude all outside private investment in any network. The third argument really only applies to super powerful national economies or blocs of economies such as the USA, the EU, Japan and China. Each is tempted to use the scale of the local market to develop its own industry standards. The coherence of such a policy is challenged by privatization when coupled with competition because in a free market each company will make its own choice of standards and technologies using commercial criteria. But privatization alone does not prejudice such a strategy.

2.2 Aims

The aims of privatization usually stress improved performance and output or 'productivity', cost accounting and cost cutting or 'efficiency', more professional management, improved corporate governance and less corruption, greater transparency in decision-making and strategic focus, wider access to capital, more focus on innovation and on customer relations management, and so forth. Although these aims are presented as win-win, there are stakeholders who stand to lose out. Where stakeholders are also political constituents it may be politically wise as well as socially desirable to put in place compensatory mechanisms if the market does not already do this. For example, tariff rebalancing raises local prices and brings down long distance prices, and while some residential users will gain more than they lose others will definitively lose. For low income losers, such as the elderly or low-user groups, special tariffs or rebates or other welfare programmes can be used.

Stakeholders - Winners and Losers

State Sector

Winners - Ministry of ICTs who have wider policy mandates to promote the information infrastructure, e-commerce and the information society; regulators who have responsibilities to ensure transparency and competition.

Losers - Ministries who lose either financial or policy responsibilities to the Ministry of ICTs; Director-General Departments of the old Ministry of PTT who lose their regulatory role.

Private Sector

Winners - private investors of capital including foreign investors if the sector is opened; equipment suppliers and vendors who were previously excluded from supplier contracts;¹⁰ potential new entrants if the market is also liberalized.

Losers - suppliers who previously enjoyed exclusive contracts with the incumbent.

Consumers

Winners - business users who can expect heavier volume discounts, more choice of operators if there is competition, better quality of service and service level agreements (SLAs), lower long distance and international prices; residential users who can expect better customer service and choice if there is effective competition, and shorter waiting lists for telephones.

Losers - residential customers who may have to pay higher local tariffs if there is rate rebalancing, but only if they do not save equal amounts on lower long distance and international call charges; residents in under-served areas if there is no USO.

Workers

Winners - staff who have high-tech or professional skills adaptable to the requirements of a modern computer-driven telecoms business; workers in demand from new entrants where there is competition; younger workers.

Losers - less skilled workers or workers whose skills are technologically redundant; older workers.

2.3 Results

The outcome of a telecoms privatization is rather like cooking a dinner, it cannot be better than the quality of the ingredients that go into it, but it can be worse. It also depends a lot on the recipe and how well arranged is the kitchen. The recipe in this case is the design of the privatization process while the kitchen arrangement is the environment in which it takes place. For example, is the SOTE to be privatized as one entity or is the divestiture to split the company into different lines of business, or different geographical areas, in other words structural separation? Or is there to be separations accounting between different lines of business to prevent hidden cross-subsidies and predatory pricing? Is the environment to be a period of exclusivity, or a duopoly, limited entry or fully open market? Will there be an independent regulator, will there be dominance regulation, will there be a competition law, will there be unbundling of the local loop, will interconnection be mandated, and so on? And what kind of licensing regime will there be: will it be technology neutral?

¹⁰ But this can cut both ways as under WTO rules SOEs are subject to Government Procurement Agreements (GPAs). In 2002 the USA, EU and Canada objected within the WTO to the exemption of KT and NTT from their respective Government Procurement Agreements (GPAs) on suspicion of continuing Government influence over their decision-making. (*The Korea Herald*, 11 October 2002)

Studies of privatization abound in the literature. For the purposes of this paper they can be classified into two broad categories. First, econometric studies that attempt to identify the *outcomes of privatization*, successes and failures, and the factors that influence these outcomes. Second, research papers that identify the *process of privatization* in each country, the events leading up to it, the conditions surrounding it, the important environmental factors such as regulation, the state of supply and demand, the status of property rights and their enforcement, and so forth. As the econometric evidence relates directly to outcomes a sample is summarized below to review results. The findings of a selection of non-econometric studies are used in Section Three to consider lessons and guidelines.

2.4 Econometric Evidence; outcomes of divestment

Some studies use firm-level data and measure individual regulatory factors, others aggregate and compare cross-country outcomes.¹¹

- **General studies** - these look at the results of privatizations across different industries. For example, Shirley and Walsh (2000) for the World Bank review 52 studies of privatization, 32 of which found significant improvements in performance of private and privatized companies, 15 found no significant differences and 5 found superior performances in publicly-owned companies. Boubakri and Cosset (2000) examine the post-issue stock price performance of 120 privatization issues in developing countries and find statistically significant abnormal returns over a period of three years after the IPO.¹² Of course one way to achieve abnormal returns and to maximize the revenue raised by an IPO is to grant a long period of exclusivity following privatization. Wallsten (2000) studied telephone privatizations and finds that periods of exclusivity can double a firm's sale price 'but at the cost of substantially reducing investment: exclusivity periods are associated with up to 40 per cent reduction in growth in the number of telephone mainlines.' (p.16) A theme common to many of these studies is the relative importance of privatization versus competition. Some researchers predict that in a competitive environment there would be little to choose between publicly and privately-owned companies, others suggest that other things being equal privatization always improves performance, yet others stress complementarities between privatization and competition. There is no over-riding evidence to suggest any one of these statements is beyond dispute.

¹¹ 'Ideally the study of the effects of privatization and competition should be based on firm-level data. But such data are hard to come by . . . The telecommunications sector offers a convenient setting since the industry tends to be dominated by a very small number of players in any given country. As a result, the distinction between country-level and firm-level data in telecommunications industry is not as significant as in many other industries.' Xu (2002) p. 5

¹² In standard economic theory, normal profit equates to the competitive return on capital (the long run rate of return) plus any risk premium the market imputes for innovation. Above that the rate of return is considered abnormal and in competitive markets will be temporary. In cases where privatizations are accompanied by periods of exclusivity, abnormal profits could be expected.

- **Productivity, Output and Employment** - Xu (2002) for the World Bank uses country-level panel data from 1981-1998 and finds that privatization did result in a significant shedding of labour, output growth and network expansion and to both labour and total factor productivity improvements.¹³ However the effects of privatization and competition were complementary, accounting for around fifty per cent of the growth, with competition having the greater impact on labour and total factor productivity. The effects on employment of privatization and competition tend to cancel out each other, so ‘it is not surprising that telecommunications employment was stagnant over the past two decades even as output in this sector demonstrated robust growth.’ (p.25) In another study Bortolotti et al. (2002) examine the records of 31 national telecommunications carriers from 14 industrialized and 11 non-industrialized economies that have been fully or partially divested by IPOs between October 1981 and November 1998, and find that employment fell but not dramatically, from 67,000 to 63,000.
- **Prices** - prices are notoriously difficult to compare across economies. As Boylaud and Nicoletti (2000) point out, price discounts across OECD countries can reach up to 25 per cent. Price wars are common when competition for market share is intense. Without strong regulation, predatory pricing by incumbents, including hidden discounts and discriminatory pricing, are open options post-privatization and liberalization. Privatization and liberalization also imply tariff rebalancing and another difficulty is to know how to appropriately weigh the resulting price sets or baskets of services to compare with pre-privatization and liberalization. Doove et al (2001) include price effects in their study that applies the methodology and OECD data of Boylaud and Nicolletti (2000) to an additional 23 non-OECD economies, but conclude on an uncertain note. While higher levels of regulatory intervention in non-OECD countries seem to be related to higher telecommunications prices, the same does not always hold in OECD countries, the Scandinavian countries being the case in point, which may well reflect upon not just the quantity but also the quality of regulation in non-OECD countries.
- **Investment** - Bortolotti et al. (2002) find no significant effects of privatization on investment levels one way or the other but they do find some evidence to suggest ‘regulation may strongly affect the strategic investment decision of firms’ in a negative direction where ‘a more competitive environment may crowd out investment by the incumbents, as they will have to share some of the benefits from these investments with their competitors.’ (p.264) Unbundling the local loop could fall into this category. They also see problems of attribution when they find sales of fixed lines and profitability generally increase following privatization. Prices tend to be restrained either by competitive entry or by regulation, especially in cases where an

¹³ Total factor productivity picks up productivity gains that cannot be easily attributed to increases in the productivity of labour or capital usage alone. This residual productivity is attributed to the combined effects rather than to other factors.

independent regulator has been established and introduces incentive regulation,¹⁴ so this implies profits rise because of sale volumes rather than price hikes. But they also find that 'output per worker increases more after privatization for telecom employees in economically advanced countries than it does for telecom workers in less developed nations.' (p.258)¹⁵

- **Competition and Regulation** - privatization is probably less important than competition in achieving increases in output, labour productivity, profitability and price restraint. According to Boylaud and Nicoletti (2000) in their study of 24 OECD countries 1991-1997 'no clear evidence could be found concerning the effects on performance of the ownership structure of the industry' but the 'prospect of competition (as proxied by the number of years remaining before liberalization) generally has a strong positive effect on the productivity and the quality of services and a strong negative effect on prices.' (p.7) The period 1980s-2000 has seen exponential growth in telecommunications demand for both fixed and mobile connections, and privatization may be responsible for making the supply side more responsive but equally so the effects of de-regulation and liberalization leading to greater competition.¹⁶
- **Regulation** - Clearly regulation affects market behaviour as well as market structure, although Doove et al (2001) find separating out the effects 'virtually impossible'. (p.44) Examples of regulation affecting behaviour are incentive 'price capping' which encourages output and efficiency; monopoly rent 'profits capping' which if the rate base is capital investment as opposed to shareholder funds can lead to the inefficiency of 'gold plating'¹⁷; heavy-handed dominance regulation which if it is prolonged will reduce the incumbent's motive to innovate; light-handed 'threshold' regulation which encourages market-led development till a case for regulatory intervention becomes clear-cut. In a post-privatization period, the regulatory environment by default has to be important.¹⁸ The market structure is influenced by regulation even though the

¹⁴ Incentive regulation refers to the price-cap model whereby price rises are capped at the level of increase of the retail or consumer price index minus X, where the regulator determines X. Firms are therefore encouraged to lower their unit costs by more than X to boost profits.

¹⁵ In a thought-provoking paper Roller and Waverman (2001) seem to show that the contribution investments in telecom networks make to GDP is greater the level of development of the economy, which raises question marks over the efficiency of resource allocations to telecoms in developing countries. One research paper does not prove the case, bottom-up case studies of the economic benefits of telecoms often give circumstantial evidence to the contrary, and as Duwadi (2003) points out new technologies can still offer cost-effective ways for developing countries to achieve universal service. But it is plausible that so-called 'network effects' are greater in more developed economies.

¹⁶ The standard method used in studies is to examine the three years pre-privatization and the three years post-privatization because panel data - that is data across countries - beyond three years is often not available, but realistically this is too short a timeframe in which to analyze factors such as economic growth and the effects of competition policy.

¹⁷ If the rate base is capital expenditure regulated companies have an incentive to boost their capital expenditure beyond commercial justification. A rate base of shareholder funds removes this incentive.

¹⁸ In his study of 30 African and Latin American countries, 1984-1997 Wallsten (1999) finds: 'Privatization by itself does not appear to generate many benefits, and is negatively related with main line penetration.'

market remains influenced also by other factors, such as size of market, ease of entry, availability of technology, capital and staff, and so on.

3. Lessons and Useful Guidelines

There is a large body of non-econometric studies and accounts of the privatization process from bodies such as the World Bank, the IFC, the OECD, ESCAP, from governments, from academic papers and consultants reports. One of the best and earliest accounts of an actual privatization process is of NTT in Japan by Takano (1992) for the World Bank. Key points arising from some of these studies are listed below.

- **Clear aims** - perhaps the key lesson is the need to be absolutely clear as to the aims and objectives of privatization, for example whether it is primarily a fund-raising exercise or a restructuring exercise or a prelude to full-blown market opening, and especially important 'a country must publicly clarify the decisions on corporate structure, together with how competition should be effectuated, by the time of privatization.' Takano (1992; p.123) Once an SOTE is privatized it is very difficult to restructure.
- **Commitment and Leadership** - there are so many vested interests and lobbies that the person responsible for the privatization process needs to be vested with the highest level of authority to be able to over-ride special interest groups. Ideally the person should be appointed directly by the head of state, the head of government or a very senior Minister, and with a background that draws widespread respect and support from the community.
- **Corporate Structure, Governance and Reforms** - getting the corporate structure right before privatization is important because it becomes a much more difficult task after privatization. This is especially true of geographical or market or line-of-business separations because capital markets will shy away from uncertainty. Adopting cost accounting procedures and mechanisms is also best done ahead of privatization, although this process may have to be carried over into the post-privatization period. The discovery of the real costs of doing business is also part of the due diligence process prior to an IPO. At the very least asset overheads, indebtedness and depreciation schedules have to be sorted out, especially where telecoms are being separated from posts, or structural separations are involved. Without cost accounting, tariff rebalancing also becomes impossible. All this needs to be done in an accountable and transparent manner if the cost of capital is to be kept low and credit worthiness ratings kept high.
- **Privatization Targets** - besides raising funds for the national treasury, there is little point in privatization unless objectives are set which could not be just as easily met by the SOTE. These should include growth targets, for example mainlines per capita, universal service targets, productivity and price targets, quality of service targets, and

Privatization combined with a separate regulator, however, is correlated with increased connection capacity and payphones per capita.' (p.15)

so forth. Potential investors will also look for revenue, average revenue per user and profit forecasts. It should be made clear how far these targets are dependent upon the level of effective competition and upon the nature of the regulation.

- **Government, Management and Labour Relations** - must be negotiated to mutual benefit. This is easier said than done, but there are ways to minimize the impact of job loss. The state can absorb some of the costs of pension commitments and early retirement compensation, if necessary from the proceeds of the IPO. Satellite companies can be formed to employ staff and work can be outsourced to these companies. Retraining and redeployment programmes can be funded. Labour unions can be given consultation and negotiating right guarantees, and so forth. Management remuneration is also an issue that needs to be addressed. Should it be left to market forces, or should Government continue to exercise influence?
- **Regulatory Structure** - is the regulator's office to be in any sense an independent and self-funding body? Independent of the industry means not subject to 'capture' by the incumbent or the new entrants. Independent of government simply means free to carry out government policy without undue interference from ministers and with sufficient resources to hire independent consultants and experts. The WTO BAT Reference Paper requires regulatory transparency and open-handedness, and without these in place regulatory risk will become a deterrent to private capital investment and innovation and in turn this will subvert the aims of privatization.
- **Tariff Rebalancing** - economically important but politically difficult, it needs a step-by-step approach, during which time the skewing effects will send the competition into the business and long distance markets. The transition period is best telegraphed in advance so investment decisions can be planned.
- **Interconnection** - unbundling the local loop (ULL) is the most contentious issue post-privatization and liberalization, and core network interconnection is the second most contentious issue. Unbundling the local loop is by far the most contentious issue, with economic arguments for and against. There are opportunities for the regulator to negotiate trade-offs with the privatized incumbent, such as periods of exemption in exchange for commitments to invest in the customer access network, or sunset periods for the phasing out of ULL after the new entrants have had time to build a customer base. Mandating core network interconnection is essential to provide efficient network economics that underpin competitive entry. The devil is in the detail and in the implementation. Cost accounting is absolutely necessary to arrive at sensible cost-based fees, and the regulator needs resources to be able to get hold of this information. Interim measures such as revenue-sharing, 'sender-keeps-all' and a fixed fee may be necessary before the true costs of interconnection are known. The regulator has to achieve a 'level playing field' with powers to intervene if and when private negotiations fail.
- **Competition** - is more effective than privatization on its own in bringing about improvements. The usual progression is from customer premises equipment (CPE) to

value-added services, including mobile cellular telephony, to limited entry in the fixed wireline market to full blown competition. But the rapid pace of technological advance limits the relevance of earlier models of liberalization, especially the advent of technologies enabling services such as voice-over-Internet Protocol (VoIP) - using existing circuit switched networks - and IP Telephony over Next Generation Networks (NGNs) - using IP routing algorithms. Apart from deciding how much competition to allow and when to allow it, there is also the choice of having sector-specific competition law focused on telecommunications or introducing a general Competition Law to cover all industries.

- **Convergence** - has a technological aspect and a business synergy aspect to it. Digital technology opens the road to convergence at the level of the switch and the transmission path, or multiplexing, and the latest consumer electronic access devices are paving the way for convergence at the level of the CPE. Mobile phones can display video clips, and home entertainment centres can mix TV with the Internet and download music videos and play games. More difficult to achieve have been business synergies, as the failure of the Time Warner-AOL merger illustrates, but slowly and surely telecom companies are moving into multicasting, cable TV networks into telephony and broadband Internet, and soon broadcast TV stations will be multiplexing content over digital terrestrial transmission (DTT) networks. A privatization process must address the question of what competitive, regulatory and licensing environment is to follow privatization in light of convergence.
- **Licensing** - convergence issues raise important questions about licensing services that can be offered across a variety of competing platforms. Some regulators distinguish between transmission and content in their licensing regimes, and while this makes sense in terms of recognizing there are many different ways to transmit the same digital content, can it ever hope to treat all transmission modes equally? For example, is content delivered over the Internet and the same content delivered over a cable TV or telephone network licensed in the same way? Another issue is whether licences should be company specific or line-of-business specific, geographically specific or general licences or class licences. And should restrictions on operational and commercial activities should be written into individual licences, or into the legislation under they are issued, or be part of general Competition Law? Details such as these will affect the post-privatization and post-liberalization environment.
- **The IPO** - preparing and launching an IPO in light of all the above is an exercise of considerable and growing complexity. Outside independent expert financial advice is almost a necessity. Flexibility is required to get right the following: timing of the IPO, number of tranches of shares to issue, price, ratio of placements to public offering, whether to use an auction method, the capacity of the local capital market to absorb the stock, etc.
- **Restrictions** - Governments may be under many pressures to restrict who can buy shares and who can exercise control over the privatized enterprise. Where Governments retain a substantial share holding there is a danger that the privatized

company will be serving two masters, the government and the private shareholders. Collusion between the two would be at the expense of effective competition and the consumer, so it is important to consider alternative ways to influence the economic and social behaviour of the privatized company to achieve Government objectives. Incentive regulation is one path. Restrictions on foreign investment also come at a cost, and generally if Governments wish to keep ownership and control in local hands the use of the Golden Share through which the Government can exercise a veto is a less intrusive weapon than direct involvement at the Board of Directors level.

- **Debt** - poor credit ratings of privatized companies in less developed economies may close off the capital markets to them, and sovereign debt problems may restrict the ability of the Government to assist. Bilateral and multilateral agreements with the World Bank and the IFC, other Governments or the IMF and a consortium of private banks are avenues to be explored. Telecommunications ought to be a profitable business as well as a welfare enhancing one, and in most cases good management and a well designed regime of incentive regulation should attract support.

4. Some Concluding Observations and Questions

1. World Bank - writing for the World Bank, Smith and Staple (1994) identify three core issues that must be decided prior to divestment: price regulation, network expansion targets and quality of service goals. The importance of getting the price structure right, bringing prices more into line with costs and a timetable for tariff rebalancing is also stressed by Wellenius et al. (1993). Are these the right priorities?

2. Institutional approach - Petrazzini (1995) offers the most focused analysis on privatization cases in less developed countries (LDCs) and argues they are more likely to succeed where the relative autonomy of the state insulates it from outside pressure groups and where power is highly concentrated within, and more likely to fail where relative autonomy is weak and power widely dispersed.¹⁹ Is this an argument for limited consultation, and will lengthy consultation inevitably delay sector reform?

3. Neo-Institutionalist approach - for example Singh (2000) gives pride of place to stakeholder interests and the role of incentives and property rights in the marketplace as a tool to explain the success or failure of privatization and reform. Privatization is examined within this framework by Noam et al. (1994) who suggests that special interest groups emerge as network development progresses from (i) underdevelopment to (ii) high revenue growth concentrated on urban areas to (iii) cross-subsidization of universal service to high cost areas. These special interest groups are people living in urban areas opposed to paying more than the incremental cost of a city telecommunications network. They lobby to have the right to use low cost networks catering for their specific business or residential needs. Is the rise of Asia's middle classes driving the demand for privatization, competition and more choice?

¹⁹ For a criticism that Petrazzini's emphasis upon power is too much at the expense of the role of an ideology of development within strong governments, see Ure (1993a).

4. Transaction Theory insights – this approach distinguishes between information rich and information simple transactions. Transactions that involve long term assets and relationships and ongoing coordination between transactors who are information rich are best done *within* the firm. Those which do not have these characteristics and have only simple information requirements are well suited for transactions *between* firms. The implication is that information simple markets are more easily opened to competitive entry than information rich markets. Faulhaber (2001) argues the liberalization and deregulation of customer premises equipment (CPE) was an early success because no long term relationships are involved and the information requirements of the transactions are simple. Basically, ‘where do you want the phone and when do you want the phone?’ In the United States experience, the opening of the long distance market was not very successful because the switch architecture of the old Bell system integrated many functions of both local and long distance and the complexity of the engineering and subscriber database and the billing system information required was immense. Also, long term customer relationships and interaction are important, so the regulatory costs of implementing interconnection, unbundling of network elements and so forth are very high. Is this a useful framework for designing and thinking about the costs and benefits of different approaches to structural reform and the opening of markets?

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APPENDIX - Capitalisation of Major Private Telecom Companies in Asia

10/2/2003

<u>Company</u>	<u>Currency</u>	<u>Local price</u>	<u>Mkt cap (US\$ bn)</u>	<u>Date of IPO</u>	<u>Weight in local Index</u>
Cellular carriers					
Pan Asia					
SmarTone	HK\$	11.95	0.9	10/31/96	-
SUNDAY	HK\$	0.37	0.1	3/16/00	-
CMHK	HK\$	20.80	52.4	10/23/97	11.695%
Unicom	HK\$	6.65	10.7	6/22/00	2.375%
SK Telecom	Won	186,000	13.3	11/7/89	5.240%
KT Freetel	Won	21,750	3.5	12/7/99	10.474%
LGT	Won	3,810	0.9	9/20/00	2.662%
MobileOne	S\$	1.42	0.9	12/4/02	0.816%
TAC	US\$	1.48	0.7	10/13/95	0.278%
AIS	Bt	57.0	4.2	8/5/93	-
Digi	RM	3.72	0.7	12/18/97	0.787%
Maxis	RM	6.45	4.2	7/8/02	4.511%
PT Indosat	Rp	9,600	1.2	10/19/94	2.815%
TCC	NT\$	27.00	3.6	9/19/00	1.065%
Far EasTone	NT\$	22.30	1.5	12/10/01	-
Globe Telecom	P	700	1.9	1/2/90	11.620%
Japan					
NTT DoCoMo	Yen	279,000	126.2	10/22/98	0.114%
Integrated carriers					
Pan Asia					
PCCW	HK\$	5.25	3.6	10/18/94	0.801%
China Telecom	HK\$	2.05	19.9	11/15/02	-
SingTel	S\$	1.68	17.4	11/1/93	8.333%
Telstra	A\$	4.83	42.5	11/14/97	4.518%
Telecom NZ	NZ\$	5.10	5.8	7/18/91	22.0%
Korea Telecom	Won	47,350	12.0	12/23/98	4.713%
CHT	NT\$	47.90	13.7	10/27/00	3.938%
PLDT	P	670	2.1	1/2/90	12.764%
PT Telkom	Rp	6,450	7.8	11/14/95	18.229%
Telekom Malaysia	RM	7.45	6.2	11/7/90	6.782%
Telecom Asia	Bt	6.45	0.5	12/22/93	-
Japan					
NTT	Yen	516,000	74.1	1/8/88	0.212%
KDDI	Yen	598,000	22.9	10/1/93	2.404%
Japan Telecom	Yen	353,000	10.2	9/6/94	0.366%

Source: Bloomberg, CSFB estimates

