

Telecommunications and Privatization in Asia

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Abstract:

Privatization viewed as a panacea for the most pressing problems besetting the modernization and development of telecommunications has become, in recent years, a widely accepted part of orthodox thinking. Wellenius, Stern, Nulty and Stern (1989) illustrate the point. 'How should privatization be defined?' asks the International Finance Corporation (IFC, 1995). '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.'¹ Hence, by privatization is usually meant the transfer of state-owned assets to private sector ownership, management and control typified by the sale of part or all of the shares of a state owned (and operated) telecommunications enterprise (SOTE). This paper argues that the 'more exacting definition' is exactly appropriate for the experience of Western economies from which it originates, while it is too narrow, too precise, insufficiently 'generous' to capture the less clearly defined lines of demarcation between public and private capital in the context of Asian telecommunications. The paper argues that this is because the delineation between state (political society) and civil society is less well developed in Asia, certainly less well articulated in law, and unevenly developed even within single large Asian countries.

De-regulation, Privatization and Liberalization

From the outset, the terms de-regulation, privatization and liberalization, which abound in any discussion of the telecommunications sector, require some definition. By de-regulation I mean the unwriting of rules or regulations which have the practical effect of restricting entry to the industry. This mostly frequently starts with the de-regulation of customer premises equipment (CPE) markets. Domestic pressure for such de-regulation comes from user groups - usually the

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large corporate users - who want the right to attach to their telephone lines any compatible equipment, from basic telephone sets to fax machines to PABX (private automatic branch exchange) to networked computers; also from domestic CPE vendors who are anxious to see the market grow, especially if they do not already enjoy a privileged supplier relationship with the dominant telco; and from new operators wanting to break the monopoly power over terminal equipment exercised by the dominant telco; and from ministers, economists and industry regulators who want to promote competitive markets. Overseas pressure comes from bilateral and multilateral trade negotiations aimed at lowering non-tariff barriers to trade and opening market access. The regulation of CPE standards and testing procedures has been, in some cases, an effective weapon of protectionists. A recent example of de-regulation in Hong Kong arose when the regular, the director-general of the Office of the Telecommunications Authority (OFTA) determined that, subject to network technical compatibility, no cellular telephone operator has the right to deny subscription service to a customer who has bought their handset from another supplier. This is a move to force greater price competition into the handset market.

Deregulation clearly implies liberalization, and on this loose definition also includes the removal of exclusive rights from monopolies, but because these privileges are often enshrined in property rights - such as exclusive licences and franchises - their removal is legally difficult. More often however, exclusivities are enshrined in legislation which traditionally has built upon the PTT model - Post, Telegraph and Telephone administrations. These were, for historical reasons, Departments of State, usually under the policy control of a Ministry whose jurisdiction covers posts and telecommunications, sometimes in conjunction with other policy areas, such as 'energy' (Malaysia) or 'tourism' (Indonesia) or 'transport' (Philippines). The first step towards deregulation therefore required the investiture of a corporate status upon the state-run organization so that subsequent legislation could deal with it on a commercial basis. Hence the creation of state-owned telecommunications enterprises, or SOTEs. Step number two then opens, partial privatization. Partial because SOTEs are often the largest entities on the corporate landscape and quite indigestible on stock markets if sold-off in their entirety. Also, governments are reluctant to lose total control over them, seeing them as cash-cows, as national assets and as strategic industries. Even in the most developed industrial nations governments are rarely totally ready to surrender their power over SOTEs, preferring to hold back a 'golden share' which gives them the right of veto over future share-ownership. For example, the New Zealand government owns a 'kiwi share' despite having a policy of what must be, at least in formal terms, the most 'liberal' telecommunications regime in the world - there is no specific telecommunications regulator, although the sector is covered under general competition law.

By definition privatization involves the transfer of share ownership to the private sector, but the real question is whether it also involves a shift towards a market-focused management, and how this is reconciled with the social and other inherited obligations of the SOTE. For example, the SOTEs in developing economies have obligations to provide service to uneconomic rural areas, and they inherit a bloated workforce employed on civil service conditions and terms of employment. These issues cut across numerous policy considerations ranging from reforms of the state apparatus, including the separation of powers between policy-makers, regulators and SOTE operators, to macro-economic and social policy questions such as the redeployment of labour, industrial policy, service and tariff cross-subsidization, the promotion of competition within the industry, trade negotiations and the opening of markets, and so forth. So at the root of the privatization issue is really the question of how far the transfer of share ownership also involves the transfer of control and managerial direction, and when it does how far, if at all, is that to be reconciled with state interests however they may be defined.

Liberalization is a policy objective of many governments and regulators. In the ideal world of economists it is often seen as a good in itself, but as a policy objective there are many, many other influences and pressures promoting its merits. Liberalization essentially refers to the removal of barriers to market entry, and as all textbooks will dictate, this also implies the removal of barriers to exit. The latter may be achieved through an act of omission by governments more used to intervention and subsidy, or through constructed regulatory policies, such as the right of assignment of licences and a liberal attitude to joint venture partnerships and foreign direct investment in the industry which enables firms in financial trouble to spread their risk or cut their losses. More critical, however, are the rules, regulations and procedures governing the behaviour of the dominant telco towards the new entrants. Issues such as interconnection, predatory pricing, structural and separations accounting to prevent hidden cross-subsidies, discriminatory pricing, tie-in agreements and so forth are the nuts and bolts of regulation in the telecommunications industry. And built on top of all this is the licensing regime which sets the terms and conditions on entry. The most liberal, a class licensing regime which allows licencees to choose which services they offer within the class of services covered by the licence, is liberal in the sense that anyone may apply for one for a very small fee. Hong Kong is on the verge of taking such a step if the regulator's recommendations are accepted into law. Most Asian states are far from this, having only recently emerged from the PTT era.

In light of these distinctions, this paper uses the term privatization in the broadest context to refer to the process through which private capital is brought into the public switched telecommunications network (PSTN) and is likely to lead to an extension of private sector management and control over part or all of the PSTN, including privatization in the form of private network by-pass of the PSTN. This broader, looser conceptualization of privatization overlaps with the concept of

liberalization - for example, the issuing of competing PSTN licenses which allows private operators to win public network traffic - although it is possible to have either one without the other.

Asian economies each had their own reasons for choosing to reform their state and industrial policies. Some, like Burma (Myanmar) and North Korea, have made no significant changes, remaining locked in policies of autarky. Others, such as Singapore, Hong Kong and the tiny Portuguese colony of Macau, base their entire island-economies upon being open ports and international hubs for communications and trade. Their telecommunications reforms reflect this openness. Between these two ends of the spectrum stand societies which differ widely in their state ideologies, social and ethnic make-up, cultures and religions, and levels of development. But what they share in common is a relative lack of independent institutions of civil society. This stands in contrast to most highly developed Western societies and cultures, and it undermines the notion that privatization implies a clearly defined line between the state and the private sector as it does in the West.

In their very different ways, the lines of distinction between the role of the state and the productive, commercial and cultural life in Asian societies tend to be (i) less formalized than those in the West, and therefore (ii) the exercise of state prerogatives, the administration of laws and the allocation of resources can often appear arbitrary. Policy-making and the exercise of policy administration, such as the decision to issue licences to new telecoms operators, the choice of how many licenses and the choice of who they should be awarded to, are frequently opaque, lacking in transparency even to the point where it remains unclear which government agency is responsible for what, and where and when and how a particular decision was made, or indeed if a decision was made at all. Nor is it entirely unusual for commercial agreements reached by the outgoing minister of one government to be rescinded by the incoming minister of another, or for those agreements to be overturned after a legal challenge. This adds political risk to telecoms investment which may already carry substantial commercial risk.

The role of family or military or political or religious ties is usually very strong in Asian societies, accentuated by the relative lack of independent civil institutions through which social matters can be debated. This heightens the potential role of the state as the arbiter of social issues, where private interests lobby directly those who hold power not as an action complementary to their public bids but as an action which substitutes for public declarations of interest. In the case where the state itself becomes a terrain of conflict and struggle between competing social and ideological groups policy-making hits a paralysis. In his study of telecommunications in Latin America and Asia, Petrazzini (1995) argues reforms were more likely to succeed in cases where the relative autonomy of the state was high, where it was relatively insulated from political pressure, and where power within the state apparatus was highly concentrated, than in cases where political

power was more evenly contested and administrative power diffused. He contrasts the success of the privatization of Telekom Malaysia with the failure of Thailand despite years of debate within the Thai state.

Under these circumstances it makes far better sense to discuss the issue of privatization as a series of policy approaches which encourage private sector capital but which leave the lines of demarcation between public and private sector management and control of networks and services unclearly, or pragmatically, defined. Examples range from the efforts in Thailand to keep ownership of joint-venture assets within the hands of the SOTE, to controls that the Singapore government exerts over nominally private companies - although companies in which the government may indirectly own shares - to self-censor if, for example, they are handling information coming into Singapore, including over the Internet, or to promote particular technologies, such as videotex or adopt certain technologies, such as Electronic Data Interchange (EDI).

Asian economies are developing economies, their societies undergoing radical transformation, and overseeing them are Asian governments very much in the process of state-building. Privatization, under these circumstances, is a policy-instrument which can serve many different purposes and different interests - and therefore takes a variety of different forms. So the approach adopted here (i) acknowledges common factors at work - see below - but sees privatization as less of an act of transfer and more of a partial process of restructuring the relationship between state and private capital;² and (ii) emphasizes the need to explore that variety of forms to explain differences between Asian economies and the reform process. The essay confines itself to the task of providing an overview of privatization developments in Asia's telecommunications and conceptualizing a model which can provide a means by which to conduct country studies in greater depth.

Privatization in Asia

In many countries in Asia, privatizing the SOTE is seen as one of the important steps in telecommunications sector reform. Privatization is also the mainstream of the reform in other sectors and regions of the world. The number of privatizations in all sectors of developing countries has significantly increased about eightfold from less than 100 in 1988 to almost 800 in 1993. Privatization of infrastructure - including telecommunications, energy, water and transportation - accounted for the largest share of total sales volume of privatization in the developing countries, which peaked at US\$29 billion in 1992 and fell slightly to US\$24.4 billion in 1993. (IFC, 1995). Asia had only a minimal share of this total sales volume as compared with other regions such as Latin America and the Caribbean. This is due to the fact that reform and privatization of telecommunications in Asia has been slower and of more limited scope. See Smith and Gregory (1994). But as Table 1 indicates, few Asian countries have not embarked on telecommunications reforms.

Table 1
Telecommunications Sector Reform and Privatization
in Asia-Pacific

Japan	Partial privatization of PSTN in the 1980s; domestic market liberalized; 3 international carriers; cable TV-telephony planned
<i>Four Dragons</i>	
Hong Kong	Four private PSTN operators since 1995; 4 cellular operators and 7 licenses; international non-voice traffic liberalised.
Singapore	Partial privatization 1993; a second cellular license awarded; liberalization of international by 2000 announced
South Korea	VANS liberalized from 1985; two international carriers; third international and domestic carriers to be licensed; cellular competition from 1996; partial privatization of PSTN planned
Taiwan	Liberalization reform agreed 1996; cellular licenses to be awarded; partial privatization of PSTN planned.
<i>Southeast Asia</i>	
Indonesia	Partial privatization's 1994, 1995; liberalization on a SOTE joint-operating scheme (KOS) basis 1996.
Malaysia	Partial privatization of PSTN 1990; liberalization of VANS.
Philippines	Liberalization of private PSTN 1994 and VANS.
Thailand	BTO schemes 1990; privatization under policy review.
<i>South Asia</i>	
India	Partial privatization of international; liberalization in cellular 1995 and in local PSTN 1996
Pakistan	Partial privatization 1994
Bangladesh	Partial liberalization of rural PSTN
Sri Lanka	Partial privatization 1992
<i>China and IndoChina</i>	
China	State-controlled local competition since 1994
Vietnam	Business co-operation contracts with foreign companies
Burma	No reform to date
Cambodia	State joint venture concessions to foreign companies
Laos	State joint venture concessions to foreign companies
<i>Pacific Islands</i>	
Fiji	Public offering planned for PSTN. International is 49% JV with Cable & Wireless
Solomon Islands	Cable & Wireless 51% JV

Vanuatu	France Cable et Radio 49% JV
Australia	Liberalization in 1992
New Zealand	Liberalization in 1990

Prior to 1988, when the shares of Hongkong Telecom Ltd were sold on the Hong Kong, New York and Pacific stock exchanges, the only traded Asian telecommunications stocks in East and South-East Asia were those of the Philippines Long Distance Telephone Company, or PLDT.³ By mid-1994, as Table 2 shows, the number of listed Asian telecommunications companies had risen to twenty seven, with the Japan Telecom Company, PT Indosat (Indonesia) being added later in the year, and PT Telkom (Indonesia), Philtel (Philippines) and TACS, the Thai cellular operating company of Ucom, which has listed on the

Table 2
Quoted Telecommunications Service Companies in the
Asia-Pacific region, August 1994

Company	Country	Year Quoted
Hong Kong Telecom	Hong Kong	1988
Champion Technology	Hong Kong	1992
Star Paging	Hong Kong	1991
ABC Communications	Hong Kong	1991
Philippine Long Distance Telephone	Philippines	NA
Philippine Telegraph and Telephone	Philippines	NA
Globe Telecom	Philippines	NA
Easycall	Philippines	1991
Time Engineering	Malaysia	NA
Technology Resources Industries	Malaysia	NA
Telecom New Zealand	New Zealand	1991
Telekom Malaysia	Malaysia	1991
Singapore Telecom	Singapore	1993
TelecomAsia	Thailand	1993
Shinawatra	Thailand	1991
Advance Info Services	Thailand	1991
United Communications	Thailand	1993
Loxley	Thailand	1993
Thai Telephone and Telegraph	Thailand	1994
Jasmine	Thailand	1994
Samart	Thailand	1994
Shinawatra Satellite	Thailand	1994
Korea Telecom	Korea	1994
Korea Mobile Telecom	Korea	1992
DACOM	Korea	1992
Videsh Sanchar Nigam Limited	India	1992
Mahanagar Telephone Nigam Limited	India	1992

NA Not Available

Source: Andrew Harrington (Salomon Brothers) 'Companies and Capital in Asia-Pacific Telecommunications' chp 4 in J.Ure (1995).

Singaporean exchange, being added during 1995. Additional listings planned for in 1996 include Smartone (Hong Kong), and in Thailand, Jasmine Overseas and Shinawatra International.

This leap in numbers represents not only 'privatization' in the narrow sense of the selling off parts of state-owned telecoms enterprises (SOTEs), but using a 'generous stance' definition, 'privatization' in the sense of opening the market to the entry of private operators. Only one-third of the listed companies in Table 2 represent SOTEs, while many non-listed private operators have also gained licenses to operate in Asian markets in recent years.

In the most straightforward case, privatization is the sell-off of shares of the SOTE to private investors and this is usually one of two types. First, shareholder privatization through an IPO (Initial Share Offering) leading to a stock exchange listing, an approach adopted by Telekom Malaysia in 1991 and Singapore Telecom in 1993 when they listed around 18 per cent and 10 per cent respectively of their shares. Similarly in 1994 when PT Indosat (Indonesia) and in 1995 when PT Telkom (Indonesia) launched IPOs of around 25 per cent and 20 per cent respectively of their shares on the NYSE, London and Jakarta stock exchanges to raise \$1 billion and \$1.68 billion of private investment. In all these cases only a fraction of total shares were on offer. For a thorough discussion of IPO procedures and methods of placing an initial value upon the shares of a SOTE, see the analysis of Japan's NTT's IPO in Takano (1992).

Second, operator privatization involving the sale, normally through a sealed-bid auction, of the SOTE to one or more private telecommunications operators, usually international carriers or substantial national operators with deep pockets and a wealth of managerial and technological experience. For example, in 1990 New Zealand Telecom was auctioned to Bell Atlantic and (USA) and Ameritech (USA) for NZ\$4.25 billion.

Market liberalization is also a form of privatization by opening the market to new entrants backed by private capital, although in principle the new entrant could be another state-owned entity as is the case in China and Vietnam.⁴ In 1991 the Australian government, having merged Telecom Australia and OTC (Overseas Telecommunications Corporation) into Telstra, then created a duopoly by awarding a second carrier license to Optus Communications, a consortium consisting of Bell South (USA), Cable & Wireless (UK) and four local partners. As part of the deal the

government sold to Optus Australia's debt-burdened satellite, Aussat, for \$800 million. In both Australia and New Zealand these steps were seen as the first towards further market liberalization.

A related form of privatization through market entry is the outsourcing of telecommunications business to the private sector. Pressure from two principle sources gives rise to this development. In the case of a privatized company operating in a liberalized market there exists an imperative of competition to drive costs to a minimum and shareholder value to a maximum. Telcos in all liberalized markets have sought ways to outsource business considered vital to their operations but inessential to their commercial competitive advantage. For example, the ducting of telephone cables and the building of new exchanges/central offices, building and office security, and certain non-strategic data management functions.

In the case of a SOTE in a developing economy the pressure more usually arises from a lack of capital and management resources to meet subscriber demand. In 1990 Thailand's two SOTEs, the Telephone Organization of Thailand (TOT) and the Communications Authority of Thailand (CAT), responsible for domestic and international telecommunications respectively, broke new ground when they began a series of Build-Transfer-Operate (BTO) agreements with private sector companies, such as Charoen Pokphand, Loxley, Samart, Shinawatra and others. Under the BTO arrangement the private sector builds the network and transfers ownership to the TOT or CAT - or the Posts & Telegraph Department (PTD) in two of the three cases of Vsat (Very Small Aperture Terminal) - but continues to run the network on a revenue-sharing basis for the period of the franchise. The BTO has been used in Thailand to steer around the problem that the telecommunications laws, which date to the 1950s and 1970s, require services to be state controlled. Fixed-wire and wireless services are now extensively offered on a BTO basis. In Indonesia, PT Telkom adopted a similar approach in 1989 when PBH (Pola Basi Hasil) revenue-sharing agreements were reached with nine private sector companies to build fixed-wire local loops. In this case both ownership and operation were transferred to PT Telkom, although line maintenance was sub-contracted to the PBH partners.

There is another reason for outsourcing. It is common in developing countries, such as Malaysia and Indonesia, for SOTE's subject to corporatization and privatization to be required to guarantee the employment and the pension rights of staff as a means of softening labor union opposition. One means used to guarantee employment but shift excess staff off the books of the operating company is to set up subsidiary or auxiliary companies to undertake outsourcing. In Asia this approach was first adopted by NTT in Japan following corporatization in 1985

and the beginnings of privatization in 1986. Even so, by 1990 NTT had cut back its 1984 workforce of 310,000 by 50,000. (Takano, 1992). In the case of Indonesia today the foreign companies being invited to participate in the Joint Operating Scheme (KOS) in different regions of the country are required to employ PT Telkom staff.

Privatization as a Development Issue in Asia

Privatization is now widely promoted as a way to tap into a wider pool of investible funds - though corporatization alone usually ensures access to major capital markets - and as a milestone on the route towards a greater responsiveness to the market and to customer needs. Privatization is seen as a stepping-stone towards, if not the actual achievement of, competition in facilities and services. And in the world's poorest economies even the thorniest of problems, such as the goal of a universal basic telephone service, are now seen as being eased rather than exacerbated by privatization. (See Smith and Gregory, 1994)

These perceptions have been espoused in a stream of papers, publications and reports from the World Bank and its affiliate, the International Finance Corporation (IFC), in the APEC Telecoms Working Group forums, in the GATT and GATS and WTO debates, in ITU forums, as well as in an uncountable number of international telecoms and information technology trade conferences. And increasingly they are being accepted across Asia. Among the reasons, three are outstanding.

First, a shift in perceptions was triggered by the apparent success of radical policy changes in the early 1980s, which notably included the anti-trust divestiture of AT&T in the United States, and in Britain Mrs Thatcher's privatization of Cable & Wireless and British Telecom. These policy shifts provided both templates for other governments, including Japan,⁵ and strong practical and ideological arguments for the process. On the practical side was the sale of state assets, the rundown of state liabilities and the promotion of local stock markets; on the ideological side the commitment to markets in opposition to state ownership and control. Second, the countries of the OECD, led by the United States, were increasingly determined to force open world markets for trade in services, and in consequence brought considerable pressure to bare on the more advanced developing economies, especially in Asia. These pressures came both directly through trade negotiations and political contact, and indirectly through the recommendations of multilateral lending and aid agencies, and other international bodies, including those listed above.

Third, although the debt crisis of the early 1980s generally affected Asia less than other parts of the world, such as Latin America and Eastern Europe - although there were notable exceptions, such as the Philippines - many Asian governments, in Malaysia for example, did feel the impact of a fiscal crisis as world trade threatened to collapse. Fiscal tightening in South Korea and Taiwan in the later

1980s and early 1990s arose for similar balance-of-trade and payments reasons. These pressures, which derived from the growing integration of the world's production, trade and financial systems, affected alike the more export-oriented economies found mostly in Southeast and East Asia, and the more closed or protected economies concentrated on the Indian sub-continent of Southern Asia and Indo-China. Under these circumstances of fiscal uncertainty privatization became an increasingly attractive option, quite independently of any intrinsic merits or relevance to the industries concerned. In India, for example, the programme of privatization announced in 1991 by Prime Minister P.V. Narasimha Rao departed radically from the policies of all post-Independence governments in India.

In Vietnam, where the Communist Party and government remain staunchly statist, the Stalinist constitution of 1980 was replaced with a new one in 1992, the guiding principle of which is 'doi moi' or economic renovation through innovation, laying the groundwork for a greater role for private, including foreign, capital. Foreign investment has also been encouraged by China, although in the area of telecommunications this remains restricted to equipment manufacture and does not extend to network ownership or operation. In the early 1990s China's Open Door policy, initiated by paramount leader Deng Xiaoping after 1978, was given significant impetus by the declaration of a 'socialist market economy' involving state enterprise reforms, including partial privatization.

The aims of privatization differ as widely as the variety of forms. At one radical extreme there stands an ideological commitment to minimize the role of the state as a direct agency of production, distribution, exchange and of redistribution. Undoubtedly the privatization programme of the Thatcher Government in Britain after 1979 was conducted in this spirit, and it is interesting to note that Mrs Thatcher's first privatization was the sale of a SOTE, Cable & Wireless.⁶ New Zealand and Chile have been the most radical in the Asia-Pacific region, the latter strongly ideologically motivated. At the other end of the spectrum is the view that telecommunications is a security issue and a national asset that must not fall into foreign hands. But even in this case there is a pragmatic recognition of the need to tap into a wider pool of capital for the development of the network. China, for example, has encouraged the use of Build-Transfer-Lease arrangements in telecommunications. Local state enterprise, and in at least two cases overseas capital,⁷ has been permitted to 'invest' in building fixed-wire and wireless networks either by leasing equipment to the PTAs (Provincial Telecommunications Authorities) or by building and transferring networks to the PTA and then leasing them back on a local joint-venture operating and revenue-sharing basis.

Behind such pragmatism lies a recognition of the changing role of telecommunications within modern economies. The technological

transformation of the industry over the past decade has changed its entire relationship to the productive economy, making it central to economic and industrial development. With the world market encroaching upon every society the developing countries of Asia know full well how strategic a modern telecommunications network is for their survival in a competitive global economy. The broad principles of these radical changes were already evident to industry specialists by the early 1980s, although policy makers were then more likely aware of the role computers and micro-processors were due to play in the transformation of industry than of the role of telecommunications. From the early 1980s, and in some cases earlier, the newly industrializing countries (NICs) of Asia, especially the four dragon economies of Hong Kong, Singapore, South Korea and Taiwan, but also a second tier including China, India, Malaysia, Pakistan, Thailand, were developing policy initiatives to encourage the adoption and diffusion of the new technologies. For a discussion of telecommunications policy across Asia in this context see chapters two and three in Ure (1995).

With the recognition growing across Asian economies of the need to place telecommunications development on the fast track, there were two courses of action open to governments. The first was to commit more public funds to investment within the industry. The problem with this option was threefold. First, the fiscal crisis which hit many states in the early-mid 1980s triggered by a recession in global trading and the world debt crisis. This was certainly the factor behind the Malaysian government's 1983 plan for the privatization of telecommunications.⁸ Second, governments in developing countries have tended to view the telecommunications sector as a source of scarce foreign exchange, and telecommunications has been a net contributor, not a net recipient, of funds. In Indonesia and Taiwan, for example, as much as 60 per cent of annual telecoms revenue has gone to the treasury during periods of fiscal tightening. Third, a state bureaucracy is not well adjusted to the management of a sector which is subject to fast changing technologies. Technological transformations raise the risk level of investment because it is difficult to predict which technologies will prove successful and which will not. The greater the risk the greater the need to spread it across multiple operators.

The second course of action was to open the telecommunications sector to private capital, through privatization, liberalization and deregulation.⁹ This is now the favored policy direction, although as Petrazzini (1995) and Ure (1995) point out there are numerous interest groups in developing Asian countries, ranging from ministries (e.g. China) and the military (e.g. Thailand) to labor unions (e.g. Bangladesh) and state managers (e.g. Taiwan), who have reasons to oppose or delay such plans. Since each of these steps, privatization, liberalization and deregulation, involves the greater participation of the private sector in the industry we shall continue to use the term privatization in its broadest sense to mean the transfer of at least some ownership or control of telecommunications from the

state to the private sector through the opening of an enterprise or the industry to private capital.

The societies of South and Southeast Asia are undergoing an historical change similar to the changes Europe experienced from the sixteenth to twentieth century, except at an accelerated pace. Within the span of one century they are nation-state building, seeing the struggle to life of political and civil societies, experiencing population shifts from rural to urban communities, industrializing - albeit very unevenly - and becoming integrated into a world system of production, trade and finance. The Singapore government, for example, in recognition of the need to develop the city-state into a regional financial centre, saw the privatization of Singapore Telecom as a way to boost the status of Singapore's stock exchange. (See Hukill, 1994.) The process of economic integration is inevitably uneven, and different centuries of development are evident within quite small geographies, as telephone densities illustrate. Throughout South, Southeast and East Asia, which is home to fifty per cent of the world's 5.5 billion population, most people do not live within twenty-four hours walking distance of a telephone. At the same time, the region is home to some of the most advanced telecommunications network facilities in the world, in Japan, Hong Kong and Singapore, and by 2000 many of the metropolitan cities of the region, Beijing, Shanghai, Bangkok, Kuala Lumpur, Jakarta, will have telephone penetration rates of between thirty and fifty per cent. This will be dial-tone. At the same time digital mobile cellular telephony will be widespread, cellular roaming services, including satellite systems, will be common across Asia, Internet access will have become ubiquitous, while ATM high-speed data-switching and SDH (SONET) high-speed data transmission will be fully operational in the region's most international cities.

This is the context within which Asian countries view telecommunications, a context of development, and it over-rides specific ideologies. In the case of telecommunications, development has a double meaning. It means how to bring telecommunications within reasonable access to the people who will benefit - the goal of universal service. However, owing to radical changes in technology it now also means how to modernize the economy through information technology. The reason for this second imperative arises not from the technology *per se* but from the growth of the world market. The growth of Asian economies is dependent upon their integration into the world economy, and those deliberately isolated from it, such as Burma (Myanmar) and North Korea, or unable to enter, simply stagnate. The 1990s is the decade when this convergence of world economic forces and information technology has become a priority development issue - see the *World Telecommunication Development*

Report, ITU (1995) - and forms the backdrop to telecommunications policy throughout Asia.

Modeling Privatization in Asia

But understanding the background does not answer the questions: when and why did a particular government in a particular country decide to reform, including privatize, its telecommunications industry? Having decided to do so, what determined the form of privatization? How successful was the implementation of the reforms and what factors were decisive in the outcome? A detailed and comprehensive answer to these questions must await further study - at the time of writing an APEC consultancy study is being undertaken into these very questions - but we can give some review of the issues and Asian experiences to date.

We may begin with a consideration of the objectives of privatization. Having argued above that the aims of telecommunications privatization in Asia are better understood in terms of national development than in terms of ideologies, it is appropriate to model the argument in terms of driving forces and mediating factors which may act as constraints or as issues which determine final outcomes. One set of factors would be contingencies, such as a fiscal crisis, or a sudden change of government or the overall course of government policies. We have already cited Malaysia as an example of fiscal crisis. Another set of factors would arise from the private business sector, the major users of telecommunications services who are looking for a better quality of service and competitive pricing, especially the foreign multinationals who can choose their foreign locations and regional communications hubs. This is a demand-side factor. A third set of factors would arise from international pressures, for example from the WTO, APEC and the USA. A fourth set of factors would be associated with the issue of development, the need to provide an infrastructure for local development and to provide an attractive environment for foreign investment. The latter issue may be regarded as the supply-side of the demand from multinationals referred to above. We can use as shorthand for each of these sets of factors: fiscal crisis, private capital, WTO and teledensity.

Interacting with each of these are local constraining or driving elements. The government, as represented by the Ministry of Finance (MoF) stands to lose recurrent foreign exchange revenue from privatization, but gain a windfall income from the sale of shares, while reducing its liabilities. It is interesting to note from Table 3 that besides the Philippines, only Hong Kong and Japan operate entirely private international carriers.

Labor unions can be another powerful influence on the timing, extent and form of privatization. In India, Pakistan, Sri Lanka and Bangladesh unions have effectively blocked privatization either totally or to a large extent. In Thailand also. In Malaysia and Indonesia they have lobbied hard for government commitments to protect employment, as also in Taiwan where in January 1996 the government was forced to concede to worker's representation on the soon-to-be incorporated

Table 3

Company	International Communications Revenue (\$m 1994)	World Rank	State Ownership
KDD (Japan)	2,869	7	0%
Hongkong Telecom	1,944	8	0%
Singapore Telecom (Singapore)	1,185	15	89%
DGT (Taiwan)	936	17	100%
Korea Telecom (South Korea)	604	25	80%
IDC (Japan)	586	27	0%
PLDT (Philippines)	563	28	0%
ITJ (Japan)	532	29	0%
Indosat (Indonesia)	394	33	65%
China Telecom (China)	382	34	100%
Telekom Malaysia (Malaysia)	379	35	75%
VSNL (India)	335	37	85%

Source: *CommunicationsWeek International* 27 November 1995 p.17, which lists Hongkong Telecom under Cable & Wireless, ranked number 3.

Chunghwa Telecommunications Company (CTC) which is currently part of the Directorate-General of Telecommunications (DGT). Nationalism, which is systematized throughout much of Asia in this period of state-building, is a further constraint. In Indonesia, for example, the government has felt it necessary to step warily towards privatization least it be accused of selling-out to foreign interests. In China foreign direct investment in telecommunications remains taboo, despite openness in other areas. Telecommunications continues to be treated as a sacred cow, a national and security asset, rather than as a mass consumption commodity.

Finally local interest groups, lobbyists who have an interest in the industry. These could include local users, including consumer groups who oppose opening the market for fear that tariff rebalancing will disadvantage domestic subscribers, but also local aspiring new entrants who want a share of the pie. They may welcome foreign partnerships or wish to protect the market for themselves. In each case a

study of the local situation, its politics and personal and business networks, needs to be undertaken to reveal its dynamics. The following Table 4 suggests a possible set of forces at work, some showing negative reactions (-) against pressure to open markets and privatize in the broadest sense, others showing positive responses (+) in favour.

Table 4
Matrix of Negative Reactions (-) and Positive Responses (+)

Drivers	MoF	Labor Unions	Nationalism	Local Lobby
Fiscal crisis	-/+	-	+	+
Private capital	+	-	+/-	+
WTO	+/-	-	-	+/-
Teledensity	-/+	-	-/+	-/+

The above model is schematic, but illustrates some of the potential drivers behind policy-making and some of the constituent constraints and influences upon policy-making. Further research at country level reveals what the ITU (1995) calls three waves of liberalization: the first in the mid-1980s led by Japan, Australia and New Zealand; the second coming in the later 1980s involving many of the ASEAN countries, such as Malaysia, Indonesia, Thailand and Singapore, but also Hong Kong, South Korea and Taiwan; and the third current wave in Southern Asia and IndoChina. But as we indicated above, in each telecommunications jurisdiction very different the local circumstances led to many different forms of private capital entry and state-capital relations.

Krzywicki (1994) offers an interesting perspective on the forms of entry of private capital in Asia's telecommunications markets. He suggests a trade-off between the risk associated with operator-privatization, which is most likely in the least developed countries where a 'junk the local operator and start again' approach may be the ideal option, and the inherited skill-set that comes with the stockholder or equity privatizations of SOTEs in the developed economies. He places most of Asia somewhere between the two extremes, and argues that operator privatization does not guarantee the benefits accrue to the country privatizing. His main point is that outside operators may restructure the local network to their own advantage, but significantly his example comes not from a less developed country but from North America where AT&T took operational control of Unitel, Canada's second long-distance carrier, and steadily shifted Unitel's research and development out of the country. Equally problematic with the model is that within Asia-Pacific operator-privatization was pioneered in New Zealand and not in the developing

countries of Asia where there is considerable caution shown towards foreign network operators.¹⁰

Perhaps the more interesting trend across Asia is not the entry of foreign carriers - although many American baby Bells, European and Australian carriers are entering strategic alliances - but the role of Asian telecommunications companies entering the regional market. (See Ure, 1995, and especially chapter 4 by Andrew Harrington.) Thai companies like Charoen Pokphand, Jasmine, Loxley and Shinawatra, Malaysia companies like Sapura and TRI, Singapore Telecom, Hongkong Telecom, Hong Kong's Hutchison Telecom, Champion Technologies, Star Paging, and Korea Telecom and others large and small are penetrating each other's markets in local alliances. Japanese companies, like NTT, are also very active, using their traditional alliances with Japanese trading houses such as Itochu, Marubeni and Sumitomo to open doors in Indonesia and the Philippines. The nation state-private capital relationship is therefore being overlaid with capital which is distinctly Asian regional.

The advantage that Asian capital has in this context is that the commercial risks associated with a potentially volatile and ill-defined state-private capital relation - one where licenses issued today may disappear tomorrow, where government policies can alter radically over short periods, where regulation is opaque, where the hidden costs of doing business can be very high, and so on - to say nothing of uncertain market demand, are excessive. International Western companies, with stockholder considerations upper-most and every contract and negotiation put under the close scrutiny of corporate lawyers, are either loath to entangle themselves or find themselves ill-informed and uncertain. Local Asian capital, often controlled by families, and perhaps more use to the ways of doing business in the region, can enjoy lower transactions costs and are able to accept higher risk on the basis of extra-contractual understandings.

Of course, there are some economies of scale not available to the small private Asian companies, while companies like Hongkong Telecom (Cable & Wireless) and Singapore Telecom are just about as international as AT&T or BT. But it is interesting to speculate that as the region grows and as technologies break down the distinctions between fixed-wireline and wireless communications, it will be Asian capital that dominates the Asian marketplace, and Asian states that aids that process.

Welfare Effects of Privatization in Asia

No comprehensive study of the welfare effects of telecommunications privatization in Asia has yet been undertaken. In the absence of firm evidence we may refer to more generic studies, and to the partial evidence that does exist. The World Bank (1992) covered 12 enterprises in its study of the welfare effects of privatization in Chile, Malaysia, Mexico and Britain and came out with a positive overall assessment, but admitted problems in separating out the effects of

privatization from contemporaneous changes in state policies regarding investment, labor regulation and the organizational restructuring of state owned enterprises. However only three telecommunications companies were included in the study, none of them Asian, and in the case of one of them, Telmex of Mexico, it concluded that consumers were actually worse off at least in terms of prices. Of course, higher residential tariffs may get offset by tariff reductions to the business sector which later show up in lower manufacturing and consumer service prices. Furthermore, the dynamic efficiencies associated with the implementation of new technologies which privatization can encourage are not possible to measure in the short timeframe of these policy changes.

Petrazzini and Clark (1996) offer preliminary findings based upon a study of the effects of liberalization in 26 developing countries. Since competition is likely to be the primary driver towards dynamic welfare effects, and privatization alone does not guarantee competition, and since, until very recently, competition in Asian countries has been confined to value-added services, the authors choose to use the presence or absence of competitive entry in the cellular telephone market to correlate to changes in cellular teledensity as a test of the impact of competition on accessibility. On this welfare measure, the results are unambiguously positive. But they also confirm that the threat of competitive entry may be as positive in fixed-wireline teledensity as the onset of competition. The speed with which the PLDT introduced its Zero-Backlog program, designed to abolish waiting lists in the Philippines by 1997, following the announced opening of the market, is the outstanding example. They also confirm a correlation between privatization and growth in teledensity, which by intuition we can surmise is associated with the encouragement of increased investment in the sector (see below).

Whereas they find a correlation between competition and price reductions they find no similar correlation in the case of privatization on its own. On the contrary, like the World Bank study they find price increases. Circumstantial evidence would suggest this is associated with the interests of private - especially overseas institutional - investors to protect their asset value. The difficulties encountered by PT Telkom's IPO in 1995, for example, suggests that country risk is placing a premium upon income protection. Investors prefer a period of exclusivity to protect their investments, and the approach adopted in Hong Kong during the 1980s and in Singapore in the 1990s has been to grant it. Another factor influencing local tariffs is tariff rebalancing, especially between international and local call charges. It is the usual consequence of competition, but in few Asian countries has competition yet fully emerged in international markets. In Japan and South Korea long distance tariffs have fallen significantly relative to local tariffs as the entry of private capital has made these services competitive, and liberalization of the domestic market in Hong Kong has also resulted in dramatic falls in international charges as the new local operators - including cellular - are able to deliver calls directly to HKTI and pass on revenue-shares (local deliver fees) to their customers. Circumstantial evidence from economies like Hong Kong

would suggest that competition has had the effect of improving the quality and range of customer services, but Petrazzini and Clark find no general evidence to support this contention for either competition or privatization in their survey sample.

A distinctive feature of the approach adopted in Asia towards guarding the welfare interests of stakeholders has been the partial protection afforded to labor. Traditionally telecommunications staff the world over have been among the most highly organized and paid technical workers, enjoying the benefits of state employment or employment by an entrenched private monopoly, with seniority advancement, securely-funded pensions and welfare benefits. The shift from a world in which telecommunications was regarded as a basic utility to one in which it is rapidly acquiring the characteristics of a mass market commodity is perceived by labor unions as a threat to subject their conditions of employment to the vagaries of a commercially-aggressive market economy. Privatization in developed economies has everywhere led to substantial staffing reductions, some of it technologically-induced, some of it market driven cost reduction, even at a time when the industry itself was expanding rapidly.

In Asia, however, staff reductions have been more modest, and confined to the more developed economies, like Japan, Hong Kong and Singapore, alongside Australia and New Zealand in the southern Pacific. Of course, an obvious part of the explanation lies in the degree of development of the networks. Highly developed networks tend to diminish rather than increase the demand for labour, except perhaps for the most professionally skilled. For less developed areas part of the explanation may lie with Petrazzini's point that "while privatized firms enjoying monopoly protection have retained most of their labor force, privatized companies facing competitive markets have sharply reduced their personnel." (Petrazzini, 1995, pp.8-9), and this fits for countries like Indonesia and the Philippines where until recently there was no competition.¹¹ But often in Asia it is the state, not unfettered market forces, which determines the course of restructuring. For example, according to the ITU (1995) between 1991 and 1994, a period during which the market was protected, Singapore Telecom shed 30 per cent of its employees. Over the same period, when Malaysia was introducing competition, Telekom Malaysia increased staff by nearly 3 per cent.

The fact is that in these cases, Indonesia, Malaysia, Singapore, the state remains the major shareholder and the attitude the state takes towards the trade-off between efficiency and social commitments remains important. In Singapore the government has adopted the view that the economy's stage of development requires a highly efficient information infrastructure. While the Malaysian government shares the vision - Vision 2020 - in practice its populist appeal and commitment to the Malay bumiputera ('people of the soil') over-rides other considerations.

PRIVATIZATION AND NETWORK GROWTH

Intuitively it seems likely that industry privatization - implying the entry of private capital even in the case of SOTEs - will help rather than hinder network expansion. A common objection coming from SOTEs in developing nations has been that private capital has only one consideration, profit, and resources will therefore go only to those areas where profits are highest. There are two dimensions here, one is network growth and the other is network location: where will networks be built?

It is beyond the scope of this essay to examine the latter issue, but if it is accompanied by well designed policy and regulation privatization need not mean a concentration of resources into wealthier areas to the exclusion of poorer areas. First, growth will naturally penetrate succeeding income group levels. Second, opening the markets increases the total capital resources available to fund growth. Third, well-designed and enforced revenue-sharing and interconnection agreements - especially those involving rural and long-distance networks - can generate funds for local small and medium-sized enterprises (SMEs). As people's regional and global migration patterns continue to unfold in parallel with national economic development, forming new telephone 'communities of interest', the opportunities for generating traffic revenues into rural areas increase. Fourth, franchises and licences can impose social obligations on major operators. Fifth, levies on operators put into a universal service fund can redistribute resources. Sixth, national network externalities provide a strong basis for promoting universal service.

Turning to network growth and privatization: is there evidence that privatization - as loosely defined in this essay - stimulates network growth? Again, within the scope of this essay it is not possible to provide a definitive answer since other factors would need detailed investigation, such as the degree of competition, the commitment of the state, the state of the economy, and so on. Another way to pose the question is: is privatization either necessary or sufficient? On this question we offer the following preliminary observations.

Network growth, and therefore investment, can be measured in several ways, including in terms of quality and range of services. A common measure is teledensity - that is, telephone mainlines per 100 inhabitants - but since this is, by definition, affected by the growth in population it is better to use the absolute growth in mainlines. Table 5 uses ITU data to record this growth in terms of the percentage cumulative annual growth rate (CAGR) in the major Asian and south Pacific economies over the two periods 1984-1990 and 1990-1995.

The first set of economies to liberalize (including SOTE privatization) their fixed-wireline networks in the 1980s - Japan, Australia and New Zealand - did so from positions of development, with teledensities of 47, 50 and 47 mainlines per 100 population respectively. Of the three, only New Zealand records a higher CAGR

in the 1990s. The second wave of fixed-wireline liberalization, from the late 1980s to the early 1990s, embraced two of the Asian Tiger economies - Hong Kong and South Korea - as well as the developing member states of ASEAN. Hong Kong's teledensity in 1990 was already 43, South Korea's 31. In ASEAN, Malaysia was 9, Thailand 2.4, Philippines 1 and Indonesia 0.6. In contrast to Hong Kong's rapid pace of liberalization South Korea has moved slowly, too slowly according to the dramatic fall in the CAGR 1990-1995. The story among developing ASEAN economies is rather different. Each shows substantial increases in growth rates, the Philippines outstandingly so. Although more detailed studies are required to analyze the precise sources of growth - also see Ure (1995) for references - it seems clear and common-sensical that opening the fixed-wireline markets to outside capital investment boosts the absolute level of telephone penetration.

Table 5
Mainline telephones (000s) and Cumulative Annual Growth Rates

Economy	Mainlines 1984	Mainlines 1990	Mainlines 1995	CAGR (%) 1984-90	CAGR (%) 1990-95
Asian OECD					
Australia	5,851	7,787	9,200	4.9	3.4
New Zealand	1,260	1,469	1,719	2.6	3.2
Japan	43,959	54,528	61,000	3.7	2.3
Asian Tigers					
Hong Kong	1,665	2,475	3,278	6.8	5.8
Singapore	760	1,054	1,429	5.6	6.3
South Korea	5,595	13,276	18,600	15.5	7.0
Taiwan	3,947	6,301	9,175	8.1	7.8
South East Asia			3,290		
Indonesia	536	1,066	3,332	12.1	25.3
Malaysia	849	1,588	1,410	11.0	16.0
Philippines	505	610	3,482	3.2	18.2
Thailand	519	1,325		16.9	21.3
South Asia			294		
Bangladesh	121	242	11,978	12.2	4.0
India	2,898	5,075	2,127	9.8	18.7
Pakistan	441	843	204	11.4	20.3
Sri Lanka	81	121		7.0	11.0
Indo-China			147		

Burma (Myanmar)	43	70	40,706	8.5	15.9
China	2,774	6,850	5	16.3	42.8
Cambodia	5	5	20	0.0	1.6
Laos	6	7	1,100	2.9	24.2
North Korea	570	780	775	5.4	7.1
Vietnam	70	99		5.9	51.1

But something else seems equally clear, that there are other ways of mobilizing capital for investment in telecommunications besides operator liberalization. Singapore has achieved it through state-mobilization of funds and through operator reinvestment in an increasingly prosperous economy. But significantly Singapore has joined the third wave of Asian liberalization, and under the pressure of the WTO will open its international as well as the domestic fixed-wireline market to competitive entry by 2000. China and Vietnam offer other examples of countries using the state to redirect resources and state enterprises to mobilize capital for telecommunications. But both have also opened their equipment markets to foreign direct investment and used various revenue-sharing agreements involving what we might term 'indirect foreign investment' in networks. These policies show up in the spectacular CAGRs in the 1990s. Less dramatic have been the steady growth increases across South Asia - Bangladesh until recently an exception - reflecting a growing openness to foreign suppliers and foreign investment in this area. These economies are now part of the third wave.

On this admittedly very circumstantial evidence it seems that the technological, regulatory and market forces which combine to drive telecommunications network expansion are indeed assisted by policies which open the sector to private capital, and this applies to basic service provision - the issue facing the majority of the economies mentioned above - just as much as to advanced so-called 'value-added' services. At the same time these cases illustrate the diversity of paths towards greater sector openness, suggesting that in the case of basic service provision in particular the mobilization of capital resources - we leave aside the important question of human resources - can be accomplished in different countries using a different combination of means.

Conclusion

Privatization in developing Asian economies is being driven by the same overall considerations as anywhere else, but it has a distinctly local flavour throughout most of the region. The separating line between state and non-state interests is not rigid and the state frequently wishes to promote local capital formation as an aspect of nation state-building, and not infrequently as a way to build local support for the ruling party, military faction or leading family. A state-sponsored 'consensus' is often the preferred approach, especially where the local state is

centralized and strong; and the protection of existing stakeholders is therefore given high priority. In these economies development is the key issue facing governments, and the role of telecommunications in development is paramount.

In the more developed Asian economies, the role of information is key to their successful transition to post-industrial societies, and the upgrading of telecommunications facilities and the convergence of information technologies is of paramount importance. Markets rather than consensus politics is the Western model, but even here Asian countries like Japan, South Korea and Singapore attempt to blend the two. Privatization may be a precondition for the growth of a free market in telecommunications facilities and services, and for free trade-in-telecommunications services now being debated in APEC, GATS and WTO, but in Asia it remains embedded in broader industrial, political and social aims.

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APPENDIX: Wireline and wireless (cellular and pcn) operators in South and South-East Asian economies and foreign partners

Hong Kong

Wireline and wireless voice

Company	Foreign Partners	Market
HongKong Telecom	Cable & Wireless (UK)	Wireline, cellular
Hutchison		Wireline, cellular, PCN
New T&T		Wireline, cellular
New World	Alcatel (Fr), TAC (Thai)	Wireline, PCN
Pacific Link	Vodafone (UK)	Cellular, PCN
Smartone	McCaw (US) MPT (PRC)	Cellular
Mandarin Comms.	China Travel Service (PRC)	PCN
Peoples Telephone Co.	China Resources (PRC), Unisource (US,Fr,Ger)	PCN
P Plus Comms.	Telecom Finland	PCN

South Korea

Wireline and wireless voice

Company	Foreign Partner (s)	Markets
Korea Telecom	SOTE - partial privatization	IDD, DLD, Local
Dacom		IDD, DLD
Onse		IDD
Korean Mobile Telecom		Cellular, paging
Hansoi		Cellular, paging
LG Telecom		Cellular, paging
Shinsegi	Airtouch & SW Bell (US)	Cellular

Singapore

Wireline and wireless voice

Company	Partner(s)	Markets
Singapore Telecom	SOTE - partial privatization	Wireline and wireless
Mobile One	C&W and HK Telecom	Wireless

Thailand

Wireline and wireless voice

Company	Partner(s)	Markets
CAT	SOTE	IDD, cellular
TOT	SOTE	Wireline and cellular
Telecom Asia	Nynex (US)	Wireline in Bangkok
Thai T&T	NTT (Japan)	Wireline outside Bangkok
Advanced InfoServices		Cellular
Total Access Comms.		Cellular

Malaysia

Wireline and wireless voice

Company	Partner(s)	Markets
Telekom Malaysia	SOTE - partial privatization	Wireline and cellular
Fiberail (TM/Nat.Rail)		DLD and Local Loop
Binariang	US West	Wireline and cellular
Mutiara Tel	Swiss PTT	Wireline and PCN
Syarikat Telefon Wireless	I.W.C. (US)	DLD and Local Loop
Time Telecom		Wireline
TRI/Celcom	Deutsche Telekom	Wireline and cellular
MRCB Tel		PCN
Mobikom		Cellular
Time Telecom/Sapura		PCN

Philippines

Wireline and wireless voice

Company	Foreign Partner(s)	Markets
PDLT		Wireline and wireless
Bayantel/ICC	Nynex (US), Telecom Asia (Thai)	Wireline
Digital	Telia (Aus)	Wireline
Eastern	Cable & Wireless (UK)	Wireline
Extelcom	Millicom (US)	Wireline and wireless
Globe GMCR	Singapore Telecom	Wireline and wireless
Islacom	Deutsche Telekom, Shinawatra (Thai)	Wireline and wireless
PT&T/Capwire	Retelcom (S.Korea)	Wireline
Piltel	AIG (US)	Wireline and wireless
Smart	First Pacific (HK), NTT (Japan)	Wireline and wireless

Philcom	Comsat (US)	Wireline
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Indonesia

Wireline and wireless voice

Company	Foreign Partner(s)	Markets
PT Telkom	SOTE - partial privatization	Wireline
Indosat	SOTE - partial privatization	IDD
Satelindo	DeTeMobil (Deutsche Telekom)	IDD and cellular
Excelcomindo	Nynex (US)	Cellular
Konselindo		Cellular
Metro Selular		Cellular
Ratelindo		WLL
Telkomsel		Cellular
Aria West KSO 3	US West	Local loop
Bukaka SingTel KSO 7	Singapore Telecom	Local loop
Daya Mitra KSO 6	Cable & Wireless, AIA (Sing)	Local loop
Mitra Global KSO 4	NTT (Japan) Telstra (Aus)	Local loop
Pramindo KSO 1	France Cable et Radio	Local loop

Pakistan

Wireline and wireless

Company	Foreign Partner(s)	Markets
Pakistan Tel Company	SOTE - partial listing	Wireline
Mobilink	Motorola (US)	Cellular
Pakcom/Instaphone	Millicom (Bel)	Cellular
Paktel	Cable & Wireless (UK)	Cellular

Sri Lanka

Wireline and wireless

Company	Foreign Partner(s)	Markets
Sri Lanka Telecom	SOTE	Wireline
Callink	Singapore Telecom, IFC	Cellular
CelTel	Millicom (US)	Cellular
Dialog	Telekom Malaysia	Cellular
Mobitel	Telstra	Cellular
Lanka Bell	Trans Asia Telecom (Sing)	WLL
Telia Lanka	Telia	WLL

India

Local loop

<i>Company</i>	<i>Foreign Partner(s)</i>	<i>Areas</i>
Mahanagar Telephone Nigam Ltd	SOTE - partial privatization	2
Bharti Telenet		1
Essar Communication	Bell Atlantic	1
HFCL-Bezeq	Shinawatra	4
Hughes Ispat	Nippon Denro, Hughes, Alltel (US)	1
Reliance	Nynex	1
Tata	Bell Canada	1
Techno Telecom	Moscow Tele Network	1
Telelink Network	Harris; Guangdong PTA	1

Cellular

<i>Company</i>	<i>Foreign Partner(s)</i>	<i>Areas</i>
Aircell Digilink	Swiss PTT	4
Bharti Cellular	STET (Italy)	3
Birla Comms	AT&T (US)	2
BPL Mobile	France Telecom	1
BPL Mobile	US West	3
CCIL Cellular	Airtouch (US)	1
Escotel	First Pacific (Hong Kong)	3
Essar/Sterling	Swiss PTT	1
Fascel	Kotak (Fin), Shinawatra (Thai)	2
HCL	Singapore Telecom	1
Hexacom	PCM Partnership (US)	2
Hutchison Max	Hutchison (Hong Kong)	1
JT Mobile	Telia (Swe), TOT & Jasmine (Thai)	3
Koshika	Piltel (Phil)	3
Modi Telstra	Telstra (Aus), Telecom Asia (Thai)	1
Modicom	Motorola (US)	2
Reliance	Nynex (US)	7
RPG Cellular Comms	Airtouch (US)	1
Skycell	Bell South (US), Millicom (US)	1
Tata	Bell Canada	1
Usha Martin	Telekom Malaysia	1

Sources: Ure (1995), Jardine Flemming (1996), OFTA homepage, press updates.

¹ The IFC 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.

² Nor is it simply a process of shifting the balance between the state and private capital as if these were always separate entities since the beneficiaries of privatization may well be the former holders of state power - something not uncommon in Eastern Europe

³ The PLDT was founded in 1928 under American management, eventually coming under the ownership of the General Telephone & Electronics Corporation (GTE) in 1956. In 1967 in a deal for which he was subsequently indicted by the US Securities and Exchange Commission (SEC) - for details see Manapat (1993) - control passed to a local group headed by Ramon Cojuangco, a close associate of President Marcos. Hongkong Telecom is a holding company of Cable & Wireless plc. (UK) which in 1995 held 57.5 per cent of HKT's shares, with China's CITIC (China International Trust & Investment Corporation) owning a further 10 per cent through its subsidiary CITIC Pacific. HKT owns one hundred percent of Hong Kong's dominant domestic carrier, the Hong Kong Telephone Company (HKTC), Hong Kong's international carrier, Hongkong Telecom International (HKTI), and CSL which operates cellular, paging and value-added services throughout the territory, and roaming services.

⁴ The principle shareholder in China's new entrants, LianTong (Unicom) and JiTong is the Ministry of Electronic Industries, together with the Ministries of Railways and Electric Power and several state enterprises, for example the China International Trust and Investment Corporation (CITIC). The Ministry of Defence is also involved in wireless communications through the People's Liberation Army (PLA). Many ministries run their own private networks. In Vietnam the Ministry of Defence has set up an Army Telecommunications Company (ATC) to offer services where the public network is not available.

⁵ Nippon Telegraph and Telephone (NTT) was privatized in 1985. According to Naoe (1994) the Nakasone government borrowed ideas from both the Reagan and Thatcher administrations.

⁶ Mrs Thatcher took no risks. Immediately prior to privatization the Hong Kong Government obligingly extended the exclusive operating license of Hongkong Telecom International (HKTI) to the year 2006. HKTI was generating around seventy per cent of the revenues and profits of Cable & Wireless.

⁷ The first is Huamei, a 50/50 joint venture between two American companies - SC&M International, a Chicago investment bank, and Brooks Telecommunications, a St. Louis-based builder of advanced telecoms networks - and Galaxy New Technology, a company controlled by COSTIND, the manufacturing, research and development arm of the PLA and the key agency overseeing China's aggressive defence conversion effort. The MPT and MEI hold small stakes in Galaxy. Huamei (which means 'China America' in Mandarin) has built a US\$7m prototype, state-of-the-art broadband network in Guangzhou. The

second is First Star, a joint venture between Singapore Telecom (35%) and subsidiaries of the MPT and the Beijing Municipal Government (as the principal local shareholders). Small stakes are held by the Hong Kong-listed ING Beijing Investment Company and Asia Pacific (China) Electrical Company. First Star is to build a nationwide paging network. See TIF Background Briefing Paper January 1996.

⁸ See Petrazzini (1995, p.146), but the Malaysian government was encouraged also by the lobbying of local companies eager to enter the industry. Jomo (1994, p.277) - referencing Kennedy (1991) - records that in 1983 Sapura Holdings, now a private telecommunications operator, commissioned a study by Arthur D.Little 'The Advantages and Feasibility of Privatizing Jatan Telekom Malaysia.'

⁹ Deregulation includes moves to free up the use of equipment by non-dominant operators and subscribers, the right to install private networks and to by-pass public networks, the right to offer a range of services and a range of tariffs without having to seek authorization from the regulator, and so on. Liberalization refers to the opening of markets to new entrants. Often liberalization requires a degree of reregulation to ensure fair and free competition, such as the requirement to interconnect, bans on discriminatory or predatory pricing, revenue-sharing arrangements, etc.

¹⁰ In the Pacific Islands (Fiji, Kiribati, Micronesia, Papua New Guinea, Solomon Islands, Tonga, Vanuatu, Western Samoa - ex-colonies or protectorates) the networks are largely foreign controlled or operated.

¹¹ In December 1995 the PLDT made its first announcement of staff reductions, at a time when it is aggressively expanding its build-out plans to fend-off competition from the new entrants.