Chapter IV

MEASURES FOR ATTRACTION PRIVATE SECTOR PARTICIPATION

The challenge for the countries seeking to increase private sector involvement in the infrastructure sector is in being able to put together a proposition which the private investor will find attractive but which at the same time still serves national interests in advancing effective infrastructure development.

Infrastructure investors will essentially demand an adequate return on funds commensurate with levels of perceived risk and the security of the investment. However, an attractive rate of return is still unlikely to outweigh political uncertainty and poor economic performance at levels which threaten long-term investment.

The measures required of Governments to attract private sector participation in infrastructure development relate to the creation of a favourable environment for such participation. In outlining the private investor’s perspective above there were a number economic, social, political and legal considerations discussed which all form part of this environment.

Countries, therefore, need to ensure that within the bounds of their control they maximize their attractiveness as an investment proposition by addressing the areas outlined above and minimize what are perceived by investors as impediments or risks. It is also of relevance that in coming years there will likely be strong competition for private funds given the extent of infrastructure development required in the region and the limited funds available from other sources.

A. THE PRIVATE INVESTOR’S PERSPECTIVE

The overriding long-term objective of the private sector is to obtain a return on its investment of funds and other resources. In the case of significant and usually long-term investments in infrastructure the private sector takes into account the level of risk associated with particular countries, projects and financing arrangements which over the term of the investment may have a negative impact on its long-term objective.

For any potential private sector investor, whether domestic or foreign, considering investment in infrastructure, there is a range of economic and political factors specific to the country which will be considered before even proceeding to examine project feasibility. Depending on the degree of risk associated with these factors the investor may even decide not to invest in any project irrespective of projected returns and benefits.

In terms of a specific project, private sector investors will be looking to the expected return on capital employed (ROCE). Of particular interest will be the scope for deviation from the expected ROCE which could be regarded as a form of project risk.

Closely associated with project risk is the financial risk which will vary with the specific form or forms of capital participation contemplated. The corporate law in most countries recognizes a range of lenders and shareholders with different legal status, rights of access to corporate profits and creditor priorities in the event of bankruptcy. This ranking of creditors means that different categories of lenders and shareholders face different levels of financial risk.

1. Country risk and return

Factors which are endemic to specific countries will be compared on a country-by-country basis by potential investors when deciding where funds might be placed. These factors, which together dictate the level of risk, include socio/political factors, regulatory factors and economic factors.

The socio/political factors prompt the assessments of political stability or social unrest. Investors are understandably apprehensive at the possibility of major changes in policy direction or civilian or military uprisings threatening the infrastructure and revenue flows against which their investments are secured.

Foreign investors, in particular, would also review a country’s regulatory and investment environment in both terms of placing and removing funds and the form of investment. A country which does not allow repatriation of profits will usually be viewed less favourably by investors than one that does. Similarly legal restrictions on private or foreign ownership and control may discourage investors.
In the latter case investors may be denied the opportunity they seek to have some say in the management of the infrastructure (and to their minds the security of their investment) and may also face problems in raising capital if they are not in possession of the very assets they are funding and therefore have no collateral.

The likely relative economic performance of countries will also weigh on investor deliberations. The prospects of developments such as fluctuating foreign exchange, recession, or higher interest rates will all impact on investors' perspectives as to which countries are attractive for investment.

In a worst case scenario the evaluation of these factors may influence investors not to invest in a particular country at all. Alternately, the investor might expect a higher rate of return on capital in recognition of higher risks. Countries wishing to attract foreign investment for infrastructure, therefore, need to minimize country risk if they are to attract funds at rates which are not prohibitive.

There are a number of organizations which produce credit ratings and indices which reflect the degree of perceived risk in investing in different countries. The journal *Institutional Investor*, for example, produces an index entitled 'Country Credit Ratings'. The country-by-country credit ratings are based on information provided by leading international banks and mainly assess sovereign risk. Bankers are asked to grade each of the countries on a scale of zero to 100, with 100 representing those with the least risk of default. The sample for the rating study, which is updated every six months, ranges from 75 to 100 banks. Table 4.1 shows the ratings for 1993. It should be noted that these ratings are for general investment. Other factors, such as government guarantees, will influence decisions. Even so, initial reviews are likely to be based on this type of indicator.

<table>
<thead>
<tr>
<th>Country/area</th>
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<td>Japan</td>
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*Source: The journal *Institutional Investor* (September 1993).*

| 2. Project risk and return |

In broad accounting terms, a project's expected return on capital employed (ROCE) is the expected annualized total revenue less the expected total cost expressed as a percentage of the project's expected capital cost. At the first level of disaggregation, total revenues and costs can be broken down into their expected price or unit cost and sales volume or input quantity components as shown in figure 4.1.
Table 4.2 Investment risk components, Philippines, 1991-1993

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<thead>
<tr>
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<td>(e) Labour, strike and shortages</td>
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<td>(f) Bureaucratic impediments</td>
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<td>(g) Government intervention in business</td>
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<td>(h) Threat of armed aggression (internal and external)</td>
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<td>(i) Political volatility</td>
<td>5</td>
<td>4</td>
<td>6</td>
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<tr>
<td>(j) The business confidence level</td>
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<td>Total Investment Risk</td>
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Source: The monthly publication Asian Business.

Table 4.3 Asian Business investment risk indicator, 1989-1993

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</table>

Source: The monthly publication Asian Business.

Figure 4.1 Components of return on capital employed (ROCE)
A project can fail an *ex ante* expected ROCE test (ROCE less than a minimum specified percentage return on investment) because the sales price or volume or both are too low, unit costs or input volumes are too high or because the capital cost is too high.

Examples of the causes of failure of such a test include:

(a) Government controls which keep prices at a level where revenue is too low or taxes on income high;

(b) Inability of consumers to pay — no feasible pricing structure can be developed to raise sufficient revenue;

(c) 'Smallness' of the market — owing to the size of the market, output/service at any feasible price is not high enough to raise sufficient revenue;

(d) High taxes on inputs leading to high expected costs;

(e) High transport costs of inputs again leading to high expected costs;

(f) Requirement that the project absorbs various welfare costs;

(g) Inefficient management and operation requiring that for a given output more inputs are required and consequently operating costs are too high;

(h) Inefficient management during the construction phase or the use of inappropriate technology which leads to high capital costs.

*Ex post* a project may not achieve its expected ROCE because prices, costs and volumes (or quantities) deviate from their expected values. The risks associated with these deviations from expected values can be separated into those arising during the construction phase, which mainly affect the capital cost (although errors occurring in design or construction can lead to expenditures which are capital in nature at a later date), and those arising during the operation phase, which affect current revenues and expenditures.

The principal project risks faced during the construction phase are completion delays, cost overruns and force majeure (unforeseeable course of events excusing the fulfillment of a contract).

The main project risks that can arise during the operation phase are:

(a) The introduction of price controls or 'slow' implementation of 'agreed' price adjustment procedures;

(b) Inability to supply the expected output volume owing to physical damage, labour unrest (strikes) and general operational reasons;

(c) Increases in input prices;

(d) Changes in taxation regimes;

(e) Inability to acquire the required inputs;

(f) The operating leverage of the project (that is, the proportion of fixed costs in total costs) — a project with a high proportion of fixed costs has little scope to cut costs during a period of low demand;

(i) Introduction of retrospective safety and environmental legislation and regulations.

Several of these project risks may also impact on the cash flow resulting in projects which may pass on a ROCE test but still face bankruptcy. Many aspects of project risk (and some aspects of country risk) giving rise to investor uncertainty can be addressed through contract negotiation. Investor concerns over the possibility of currency fluctuations, for example, can be accommodated by expressing returns in, say, US dollars. Similarly, investor doubts about achieving required volumes of revenue flows can be addressed through guarantee provisions. Countries or businesses entering such contracts, however, need to be fully aware of the scope and form of their liabilities.

It has been reported, for example, that the Government of India is opposed to an outright sovereign guarantee for foreign equity and borrowing in private power projects because the massive contingent liabilities arising could impact on India’s credit rating and lead to an overall increase in the cost of funds.1

### 3. Financial risk

There are elements of financial risk associated with both country risk and project risk. In a country risk sense the regulatory framework for foreign investment can act as an impediment to investment by restricting the roles of investors.

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In a project risk sense there will be a financial risk for an investor depending upon the participatory role he seeks or is able to negotiate in respect of any particular project. One investor may prefer to participate through a direct and more secure investment while others may prefer to operate as an equity participant with the prospect of capital appreciation as well as profit sharing.

The challenge for the country or project manager is in being able to put together a proposition which investors will find attractive in terms of preferred levels of financial risk but which at the same time still serves national interests in advancing effective infrastructure development.

4. Laws and regulations for private sector participation

In the past there has not been the need for private ownership of traditional public sector infrastructure. In addition the transfer of rights to foreign interests has been considered as a matter of strategic importance. The result has been that legislation has not been enacted which supports private ownership and in some cases existing laws prevent it completely. For many of the countries moving toward an increased role of the private sector there is, therefore, an urgent need to put in place the basic laws and regulations which will clarify the rights and responsibilities of the public and private sectors. This activity is an important, if not essential, prerequisite for successful privatization. Without the necessary elements being in place negotiations are more complicated and the private sector perceive an increased level of risk.

Clear and precise definition of the level of control that the Government may retain in terms of performance monitoring, pricing, employment as well as the methodology of guaranteeing projects is also fundamental to the level of confidence the private sector will have in participating in particular infrastructure projects. A careful balance is required between offering the private sector the flexibility to perform while at the same time providing the necessary safeguards for public and national interest.

Issues which need to be addressed include:

(a) Ownership: the establishment of legal ownership including the level, if any, of retained domestic or government ownership if foreign investors are involved;

(b) Corporate law: review of the definition of juristic persons to encompass foreign owned companies within the national law and to specify the formation of such companies;

(c) Arbitration: the role of national courts of law in arbitration procedures and in the case of foreign ownership third country arbitration arrangements;

(d) Status of foreigners: the provision of work and stay permits for employees and representatives of overseas private sector investors;

(e) Repatriation of funds: the convertability of profits and cash flows into hard currencies and their removal from the country;

(f) Accounting practices: the adoption of international accounting practices, for example, in the area of depreciation which can have a significant effect on project returns;

(g) Pricing: the level of freedom that will be accorded the private sector in establishing and changing prices;

(h) Taxation: corporate, value added tax (VAT) and personal tax levels, including details of tax holidays that may be offered to private sector investors.

B. MODES OF PRIVATE INVESTMENT

A range of financial instruments are being increasingly used in the region to facilitate development through private sector investment. The main forms of private sector participation are direct loans, the sale of bonds, management contracts, leasing, franchising, build-operate-transfer (BOT) arrangements, joint ventures, equity participation and full privatization.

1. Direct loans

The simplest means of accessing private sector funding is through direct commercial loans from domestic or overseas financial institutions. In practice, however, the large sums required for infrastructure financing will in most cases not be available from single lenders but require syndicated financing. Direct lenders usually demand some form of security.
Commercial direct borrowing is a major source of funds for the wholly government-owned Hong Kong Mass Transit Railway Corporation (MTR). This highly regarded corporation is by its own words 'one of the few underground mass transit railways in the world which can cover operating costs and depreciation by unsubsidized fare revenue and generate a satisfactory operating profit'. The MTR also prides itself on its reputation and its rating by one source as a secure borrower being ranked third in the world in 1989 behind the World Bank and the Kingdom of Sweden.

Construction of the Shanghai Yangpu bridge in China is being financed in part by a syndicate of financial institutions. Of the $250 million cost of the project around 34 per cent is being provided by the Asian Development Bank (ADB) and the Municipality of Shanghai; the remaining 32 per cent coming from a syndicate of local and overseas financial institutions (six banks and a life insurance company) under commercial co-financing arrangements organized by ADB and including an ADB guarantee.

2. Bonds

The financing of investment through bond issues has been practised by public utilities in developing countries for some time. The issue of bonds for sale does not, however, guarantee that the bonds will be taken up. In China, for example, it has been reported that fewer than 15 per cent of treasury bonds (carrying an interest rate of 10 per cent) issued at the beginning of 1993 had been sold by May that year. One of the contributing factors being the higher interest rates offered by, for example, the port of Shanghai (15 per cent) and Fujian province (26.67 per cent).

One of the differences between the sale of bonds and the remaining forms of private sector participation is that, given the level of guarantee attached to interest payments and capital repayment at maturity date, the sale of bonds represents a source of funds only and does not usually entail any of the management changes, institutional changes or technology transfer which are quite often being sought within the remaining forms of private sector participation.

As standards of living and volumes of savings rise in many Asian countries and their financial sectors increase in sophistication with the development of pension funds, mutual funds and other investing financial institutions, there will be increased opportunities for utilizing bond issues to mobilize local resources.

Local bond issues may not only provide increased freedom from foreign exchange risks but are also likely to lead to cheaper funds. The Mass Transit Railway Corporation of Hong Kong, for example, is reported to have raised over $200 million in April 1993 through a bond issue at rates below bank loan rates. However, it should be noted that bond issues can be used to raise overseas funds, but the experience to date appears to be that only high profile, blue chip borrowers are able to use this technique.

3. Management contracts

Under a management contract, the owner of the infrastructure facilities provides all of the fixed assets and equipment with the contractor providing key management and operations personnel. This form of participation can assist in the important area of transfer of management know-how usually with the contractor being from the same industry. It is often intended to improve performance and profitability, thereby enhancing debt servicing capabilities. However, it does not resolve any problems associated with the initial funding of projects unless it is part of the project package which may be more attractive to private sector investors.

4. Leasing

A long-term lease of a facility usually requires the private sector to make annual payments, sometimes linked to production output, thereby providing a revenue stream. Under this type of agreement, the public sector provides the 'permanent' assets, including some heavy plant, while the lessee provides the equipment and runs/maintains the facility for the duration of the lease as though it was an owned asset. This type of agreement is used in the ports sector in a number of ESCAP member countries, such as Laem Chabang, Thailand.

This form of participation at a node such as a seaport is attractive because the investment

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3 Programs Department, Asian Development Bank.
4 Agence France Press, reported in Bangkok Post (16 May 1993).
5 Neal McGrath, 'Funding for Every Occasion', Asian Business (July 1993).
required in modern cargo equipment is significant. In addition, it can also provide the opportunity for the transfer of technology and development of port operations and management skills. For the power sector similar conceptual separations can be made between generation and distribution.

For the infrastructure links (railways and roads), separations can be made between the provision of the permanent way and the provision of the rolling stock or vehicles. In the United States of America, for example, most of the inter-city rail passenger services were nationalized and passed into the control of Amtrak in 1971 (passenger services were generally regarded as unprofitable and the private companies sought to abandon them). Amtrak owns their locomotives and passenger cars and has the right of access to the national rail network which is still owned by private companies and which still carries freight.

Another form of agreement which provides the opportunity to involve the private sector in providing infrastructure services is franchising. This approach is similar to leasing but instead the ‘asset’ provided by the Government is the right to undertake an activity, such as providing a bus service, rather than right to use government developed property. In Hong Kong, for example, bus services are provided by private companies which under franchise have the exclusive right to specified routes. All capital and operating costs of servicing the routes are met by the bus companies which operate on commercial principles under a profit control scheme. While the buses are privately owned the Government still regulates the industry in terms of fares and routes. Interestingly enough the Mass Transit Railway (MTR), while Government owned, is not subject to such controls.

5. Build-operate-transfer arrangement

What is BOT and how does it work?

The form of private sector participation which is currently receiving considerable attention in the region is build-operate-transfer (BOT). It represents a form of infrastructure development in which a developer will enter into an undertaking with a Government or government agency to plan, design, construct and operate an infrastructure facility, such as a power station, in exchange for the concession to receive revenue from the commercial operation of the facility. The ownership of the facility reverts to the government sector at the end of the contract. Selection of a developer is undertaken by the tender process.

The contracts are for quite lengthy periods, typically around 30 years. Such long periods are required because infrastructure development (for example, power stations, roads, and ports) involves large volumes of capital and the servicing of that capital is based on future cash flows (i.e., power charges, road tolls, and berthing fees) arising from the operations of the infrastructure. The levels of revenue flows are in turn dependent on the affordability of the charges made to users of the infrastructure. There is also, of course, a significant lead time for construction of the infrastructure when the developer is not receiving any return on the investment.

The BOT approach is suitable for any infrastructure where a payment for usage can be exacted. Suitable infrastructure, therefore, includes bridges, roads, airports, water and electricity supply, railways, urban transit systems, and telecommunications. There are a number of variations of this style of funding arrangement including BOO (build-operate-own), BLT (build-lease-transfer), RLT (rehabilitate-lease-transfer), ROT (rehabilitate-operate-transfer).

The funding arrangements for BOT projects usually involve multiple debt and equity participants. This is because individual financiers are often reluctant to commit themselves to large sums over long periods. In addition, operating a BOT project will often be managed by one of the BOT private sector partners and the other participants would encourage such an operator to take an equity position.

Utilizing the BOT approach

The BOT approach can provide a valuable means of providing needed infrastructure in countries lacking either the funding or the expertise to develop it themselves. It is not an approach, however, that will necessarily work in or is suitable for all countries, or for all projects. For example, the private sector is unlikely to be attracted to projects which may have potentially significant economic benefit but poor financial returns. The approach is relevant where countries are subject to budgetary constraints or are looking to avoid increasing government indebtedness or to obviate public sector borrowing limits.

Inherent in the approach is the tenet that any project contemplated for development under BOT must be able to attract the interest of developers on purely commercial grounds. This means effectively that BOT projects must compete in capital markets
for funds on the basis of returns, risk etc. Regardless of the viability of a project, potential investors have to contemplate their participation against their investment flexibility needs and the likely long-term attractiveness of anticipated rates of return.

For some countries the cost of BOT projects may simply be too expensive. The cash flows generated by the infrastructure users need to be sufficient to service the project's debt at commercial rates and provide a return to equity participants and the developer. A critical factor, therefore, is whether the resultant costs to consumers of using the infrastructure are both affordable and acceptable. In Bangkok, for example, it has been reported that the doubling of the tolls on the city expressway system following the opening of the BOT second stage expressway saw motorists reluctant to pay the toll and reverting to the regular streets. However, this situation has again been reversed with heavy usage of the expressway.

There may be circumstances under which a Government is prepared to pursue a BOT project even though realizable cash flows may not be adequate to service project costs. A Government might proceed with an urban mass transit system under BOT and attract investors even though project costs cannot realistically be met on a "user pays" basis. Government provision of fare subsidies needed to encourage patronage might be justified in terms of resultant relief to chronic traffic congestion and downstream economic and environmental benefits.

For some countries the decision to acquire infrastructure on a BOT basis will also be influenced by the need to ensure it is managed and operated efficiently in the absence of local expertise and experience. The BOT approach provides an opportunity for transfer of knowledge and the development of local resources which can be drawn upon by the host economy in later infrastructure development.

The main criticism of BOT development is that it is relatively expensive and the rates of return sought by investors are high. One analysis of BOT financing has identified five factors contributing to the costs of BOT financing:

(a) **Liquidity** - investors seek a premium for holding very long-term fixed assets;
(b) **Small capitalisation** - reflecting investment in a single activity enterprise;
(c) **High overheads** - reflecting the cost of setting up a complex project;
(d) **Risk creation** - multiple risks are associated with BOT structure;
(e) **Risk duplication** - the structure of BOT leads to exposure overlap.

The same study also saw a weakness in BOT projects whereby the investment decision was made by the Government in terms of the nature and location of the facilities. Private sector involvement should, however, be predicated, among other things, on the commercial viability of a project. A poor government investment decision is unlikely to affect BOT bids.

While the BOT approach may be seen as a relatively expensive solution to meeting infrastructure demands, developing countries with their limited resources may not have the luxury of a range of financial options to choose from. It may be a case of BOT, or similar private investment schemes, or no infrastructure at all.

The Philippines, for example, has responded to the power capacity problems that have emerged in recent years through an extensive programme of power generation projects based on BOT. It has been reported that BOT might not have been the financing of choice, but "given the paucity of government resources and the level of present need" the Philippines had little choice but to seek private investment for its power sector.

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8 Eappen Thomas, "Manila Lights Up", Infrastructure Finance (Fall 1993).
Box V. ASPECTS OF ATTRACTING BUILD-OPERATE TRANSFER (BOT) INVESTMENT

BOT investment is one of the means of attracting private sector participation in infrastructure development which is currently receiving considerable attention. In considering this type of investment, countries need to assess whether the proposed project would be of interest to the private sector. It must also be borne in mind that BOT requires a complex set of contractual relationships which need to be clearly understood by all parties.

With infrastructure financing typically involving long-term periods, investors will be looking, especially in developing countries, for assurance against foreign exchange risk. Concern is likely to cover not just national policy in this area, but also general economic performance and the country's ability to provide, and if necessary deliver, exchange guarantees. Countries who proceed with foreign private investment backed projects also need to be aware of the foreign exchange factor when developing project agreements.

With a BOT project, where project earnings are guaranteed in US dollars any devaluation of the domestic currency, or increase in the value of the dollar, could lead to dramatic increases in charges for the use of the infrastructure and the possible need for government subsidies.

The financial position of the Light Rail Transit Authority (LRTA) in Manila, for example, was severely impacted by currency fluctuation. Construction of stage one of the light rail project (which commenced operations in 1984) was funded through an overseas loan. While the facility has operated soundly since its introduction with increasing patronage and revenues, changes in the value of the peso, from 7 pesos to the US dollar in 1985 to 29 pesos in 1992 have certainly impinged on the servicing and retirement of the overseas US dollar debt. LRTA officials have indicated that despite achieving a fare box ratio (fare receipts/operational expenditure) of 1.75, which they describe as the second highest in the region after Hong Kong (2.1), a doubling of fares would be necessary to meet all current overheads.

Given the sums of money involved in infrastructure projects a country which does not allow repatriation of capital and profits is unlikely to attract foreign investment. Any restrictions on foreign ownership similarly provide a fundamental barrier to the pursuit of BOT with foreign backing.

It is not sufficient to possess an appropriate regulatory environment. Potential investors and developers must also feel confident that the legal and regulatory institutions operate in a transparent and equitable manner. If a developer has to fall back on a local judicial system he wants to feel he will receive fair and just treatment. This is especially important with BOT agreements because all parties look to protect their interests and BOT agreements commonly feature default arrangements and buy-out terms.

Even with an acceptable regulatory and legal environment investors need to feel comfortable about political predictability and reliability. A country's record in dealing with private and foreign investment will certainly be addressed in any project assessment. The dispute between the Bangkok Expressway Company Limited and the Expressway and Rapid Transit Authority of Thailand over the Bangkok second stage expressway, for example, has been noted for its possible relevance to Thailand's future ability to attract foreign investment for infrastructure projects.

Absolute prerequisites for any country contemplating attracting private foreign BOT investment are receptive ownership and control regulations. The "own operate" nature of many BOT style models is such that restrictive foreign investment/control regulations could preclude utilization of that form of investment. In China for example while BOT is being successfully used for power and road projects there are impediments to applying the concept to the development of telecommunications and ports because of ownership constraints.

Two countries, which have taken positive steps to attract private investment in the form of BOT are the Philippines and Viet Nam. On April 1993 the Government of Viet Nam issued Decree No. 18-CP, which was designed to attract foreign investment in infrastructure projects. The decree authorizes BOT projects and implements amendments to the Law on Foreign Investment.
It is reported that under the decree BOT projects can be implemented by 100 per cent foreign-owned enterprises, or jointly with the Government or private enterprises, and there are no time limits on the length of BOT projects. According to the decree time periods should be long enough for investors to recover their investment and earn a reasonable profit. Thereafter the project must be transferred to the Government without cost.

In July 1990 the Philippines Congress passed Republic Act No. 6957 which authorized the financing, construction, operation and maintenance of infrastructure projects by private companies, removed previous foreign ownership constraints, provided tax holidays and allowed repatriation of profits. The Government of the Philippines had previously taken action to allow the private sector to generate power as well as the National Power Corporation.

2 "Viet Nam Goes BOT", Infrastructure Finance, Fall 1993.

The regional BOT experience

The first acknowledged major BOT project in the region was the 700 megawatt Shajiao B power station in China which was developed by the Hong Kong company Hopewell Holdings and completed in 1987 at a cost of $512 million.

Prompted by the success of the Shajiao project a number of other BOT projects have subsequently been initiated in the region including:

(a) A 210-megawatt gas turbine electricity generator at Navotas in the Philippines at a cost of $41 million was commissioned in 1991;
(b) A 100-megawatt expansion of the Navotas facility costing $40 million;
(c) The Bangkok second stage expressway costing over $600 million which was opened in 1993;
(d) A 123-kilometer highway costing $1,200 million currently under construction in China between Shenzhen and Guangzhou and scheduled for completion in 1994;
(e) A 700-megawatt thermal (coal fired) power station at Pagbilao, Quezon in the Philippines costing $933 million to be commissioned in 1995/96;
(f) A 22-kilometer ring road costing $174 million completed in Guangzhou, China in 1993;
(g) The $1,250-million Malaysian North-South Expressway;
(h) The $400-million harbour tunnel in Sydney, Australia completed in 1992;
(i) The construction of a 600 megawatt coal fired power plant in Guangzhou, China costing an estimated $600 million which commenced in 1993;

A number of countries are seizing upon the BOT model and making it the backbone of their infrastructure planning strategy. The Philippines falls into this category and has put together a BOT investment programme. The short list of this programme includes 17 projects costing $3.2 billion and covers infrastructure, such as light rail, airport terminal facilities, heavy rail, telecommunications, power projects, bridge and road works and water supply. The full list of projects, which relates to all projects potentially implementable as BOT, consists of 163 projects costing $17.2 billion. This list, moreover, does not include seven major electricity projects for which financing is assumed to have been secured.

Pakistan's Water and Power Development Authority is similarly relying heavily on BOT financing to support its power generation expansion programme over the period 1992-1998 with nearly a third of the anticipated 7,500 megawatts additional capacity planned to be built by the private sector on a BOT basis.

Examples of BOT style projects under negotiation or planning consideration in the region include:

(a) The 1,292-megawatt Hub River power station in Pakistan estimated to cost $1.3 billion;
(b) A $90-million grain terminal in Manila;
(c) Up to five extensions of the urban light rail system in Manila costing over $1.5 billion in total;
(d) A road that will in 1990/91 link the Guangzhou Shenzhen Zhuhai Superhighway with Hong Kong's planned new airport at Chep Lap Kok at a cost of around $1.4 billion.

6. Joint ventures

The current practice of joint ventures being used in, for example, China is largely based on variants of leasing and BOT. At Shanghai, the port and Hong Kong International Terminals (HIT) have formed a separate company - Shanghai Container Terminals Ltd - under a 50-year agreement. This 50-50 joint venture company will take over seven existing container berths, five container berths currently under construction and four conventional berths which will be converted to container berths.

Press reports* suggest that the port's contribution to the joint venture was the (re)valued assets (including land use) while HIT's contribution was the means of improving throughput. Apparently, during negotiations, HIT suggested that it should receive payment for transfer of knowledge, while the port suggested that it should receive payment for access to its market. In the event, no specific payment was made for the transfer expertise in improving throughput.

7. Privatization

The process

The process of privatization can involve both the conversion (sale) of existing public sector assets and facilities while providing the private sector access to an infrastructure market with the intention of increasing the number of industry participants and creating a competitive market. The privatization of public sector facilities can be undertaken in a number of ways, e.g., through offering licenses to private companies or imposing a period of time and selling off equity.

BOT is a form of privatization in that the developer owns or at least has the right of access and operates the infrastructure for the period of the BOT agreement. The essential difference between the BOT approach to funding and privatization is that BOT is normally used for individual projects or assets whereas privatization is applied on an industry basis and normally confers on the private operator the right to undertake an activity. BOT projects also normally involve Governments in the formulation of planning and commercial

Box VI. PRIVATE SECTOR PARTICIPATION AND REGIONAL ECONOMIC COOPERATION

The private sector can complement the public sector in the provision of infrastructure facilities. One such example is the joint venture between Thailand's Shinawatra Group and Isla Com Corp of the Philippines in the development of the Philippines' largest telecommunications project.

The project will involve joint investment of $1.2 billion (30 billion baht) to install 700,000 lines throughout the country. This, the first telecommunications contract between the Philippines and Thailand, involves a 30 per cent investment by Shinawatra International Co., the Shinawatra Group's international investment arm.

The joint venture firm will reportedly have a capitalization of $200 million and will eventually be listed on the Philippine stock exchange.

Other proposals made by Shinawatra to the Philippines Transport and Communications Ministry in August 1993 include the development of a local telephone network, an international network via satellite and the introduction of value added services.

Shinawatra plans to have two satellites, with a total of 12 transponders, positioned above the Philippines.

Source: Asian Communications (January, 1994).
arrangements. Under the pure privatization approach such functions are left to the private sector.

**Privatization benefits**

Some major benefits of privatization are seen to be:

(a) Maximizing the efficiency of the delivery of services through the combination of operation on commercial principles and exposure to competitive forces;

(b) Achieving an equitable basis for charging for infrastructure delivery with the users paying and cross-subsidies removed;

(c) Removing the political and public sector budget factors from the infrastructure management and investment decision-making process.

From a Government's perspective privatization can be financially attractive. Even successful government trading enterprises can be expected in the long term to seek capital injections if they are to be able to compete effectively. Insufficient enterprises may require regular subsidization. Privatization not only removes such expenditure from the government budget but can provide attractive short-term capital recovery from the proceeds of sales of enterprises or market access. It has been reported\(^\text{11}\) that since 1990, some 60 countries around the world have undertaken privatization programmes and around 8,500 state-owned enterprises have been sold off generating $328 billion in government receipts.

From the enterprise's perspective, privatization is attractive in facilitating capitalization and competitiveness. As mentioned above public enterprises with high debt gearing are generally at a competitive disadvantage, compared with their private sector counterparts. Moreover their success in obtaining capital from their own, the Government, will rely on their ability to compete for funds against all the other demands for public funding, rather than the level of efficiency of the use of the capital.

From the point of view of the general public, privatization can lead to improvement in the efficiency of existing infrastructure in developed countries, to an inflow of private sector funds and the speedier development of needed infrastructure.

A concern of the general public can be that different attitudes may prevail towards cross-subsidization and that services previously provided by the public sector might be charged at full cost recovery, or at the extreme, not provided at all by a private owner. A privatized bus company, for example, in keeping with its profit objectives, might not want to provide services on uneconomic routes which might previously have been served by public sector buses on community service grounds. This is one of the reasons why the Hong Kong Government retains control over the routing of its franchised bus services. Similar conflicts can arise in the provision of services such as electricity and telecommunications to rural areas. The high capital cost of extending services to low population density communities can result, without some form of cost recovery, in cross-subsidization, in cost recovery levels which are not affordable by those communities.

A further concern of the employees of an organization which is proposed to be privatized relates to any possible change which may occur in their pay, benefits, job security and status. In the case of the privatization of the Klang Container Terminal there were complex negotiations between the civil service union and the management of the new company. The outcome was that container terminal employees were given the opportunity to select one of three options:

(a) To take a lump sum severance package and/or early retirement which included pension benefits;

(b) To remain as an employee of the Port Authority; or

(c) To terminate their employment with the Port Authority and become employees of the new company on overall terms and conditions which were no less favourable than those offered by the Port Authority.

**Applicability of privatization**

Because private sector investment seeks a reasonable (by market standards) rate of return, privatization is generally limited to infrastructure with a profit potential. The accumulated debt and continuing operating deficits of most railways in the region, for example, have limited the opportunities for privatization of rail services.

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\(^{11}\) Sara Khalili, "The Uneven Triumph of Privatization", Infrastructure Finance (Fall 1993).
Full privatization also needs to be examined carefully as a policy option under circumstances where there is a natural monopoly, such as the provision of water services, or where the size of the market is such that it will not support a number of players. Under such circumstances uncontrolled single operators are in a position to charge whatever they think the market can bear. Therefore, some form of regulatory mechanism may be required.

In many instances countries are looking to improve the performance of infrastructure in the uneconomic and natural monopoly categories through corporatization or partial privatization. Corporatization involves the reorganization of government business undertakings as corporations with management and financial autonomy but with Government remaining as the sole shareholder.

Privatization investors appear to show a distinct preference towards public sector trading enterprises that have been commercialized and corporatized. This is not surprising as the accounts and performance of such enterprises provide a transparent guide to the enterprises' financial position and ability to operate independently of the Government. Governments, therefore, often pursue commercialization and corporatization as a prelude to privatization.

Partial privatization involves sale of only a portion of equity and leaves the Government able to exert some control over the policies of the enterprise through its position as a significant shareholder. Partial privatization can also be a means of phasing privatization, giving the Government some measure of control through the vulnerable formative periods of market expansion.

Competition benefits can also be realized through contracting out specific services or functions on a tender basis. The stevedoring activities of handling cargo from ship to shore, for example, are frequently carried out under contract.

The regional privatization experience

Telecommunications is the area of infrastructure in which privatization has been utilized the most. Among the developed countries Japan's Nippon Telephone and Telegraph was partly privatized (54 per cent) and at the same time the market opened to other participants in 1967. Three other private carriers have subsequently entered the long distance phone market, and rates have been cut five times and are now 50 per cent cheaper than in 1987.12

The other developed countries have also liberalized telecommunications. New Zealand Telecom was corporatized in 1987 and privatized in 1990 raising $2.5 billion. Telecommunications are now not only more efficient (95 per cent digital) but also cheaper. Long distance call costs have been reduced by 60 per cent.13 In Australia a second telecommunications carrier was licensed in 1981 and the government carrier Telecom was merged with the prior overseas call carrier and corporatized.

Privatization has not been restricted exclusively to the developed countries. Singapore Telecom was corporatized in 1992 and was expected to be offered for sale in 1993. Malaysia has corporatized and partly privatized its carrier, now Telecom Malaysia. In Pakistan the public operator is being privatized. In India, Indonesia and Thailand competition is allowed in some services.

Privatization in the air transport sector has been restricted to date to air carriers rather than airports. In 1990 the New Zealand Government fully privatized Air New Zealand. During 1992 the Australian domestic carrier Australian Airlines was fully absorbed by the international carrier Qantas which in turn was offered for sale by the Australian Government with British Airways purchasing a 25 per cent share. In early 1992 the Government of the Philippines sold a 67 per cent share in Philippine Airlines to local investors, and a minor proportion of shares in Thai Airways International was floated on the Stock Exchange of Thailand. The Government of China has, since 1985, pursued a policy of encouraging provincial governments to establish their own carriers. By early 1993 there were 16 semi-private carriers operating in China.

It has been reported14 that airlines are difficult to sell at the moment when confronted with volatile fuel prices, poor ticket sales, fierce price competition and concern about terrorism.

The tendency with airports has been toward autonomous public authorities or corporations rather than privatization. This has happened to varying degrees, for example, in Australia, China, Malaysia, New Zealand and Thailand.

14 Sara Khalid, op. cit.
In the power infrastructure sector the State Electricity Authority of Victoria, a state-owned enterprise in Australia, was able to secure the funding it required for the development of its 1,000 megawatt Loy Yang B power station by selling a 51 per cent interest in the project to private interests as part of a $1 billion privatization process.\textsuperscript{15}

Similarly the $2.5 billion Dabhol LNG fuelled power station in India will be 100 per cent owned by two United States companies. Electricity output will be sold to a state utility for distribution.\textsuperscript{16}

One of the barriers to privatizing railways and public transport utilities in the region is typical large financial deficits and debt accumulation incurred by rail enterprises. The only examples in the region of privatization of rail have been the former Japanese National Railway in 1987 and the sale of New Zealand Railway Ltd in 1993. Both transactions were preceded by a buy out of railway debt ($245 billion in Japan and $625 million in New Zealand. The Philippines National Railway has announced a reform strategy leading to privatization, but will also have to overcome the problem of significant accumulated debt (around $90 million).

Malaysia has also shown that privatization can work in the port sector. The Port Klang Container Terminal was incorporated in 1985 in preparation for privatization and in 1986 a 51 per cent share was sold off to private interests.\textsuperscript{17} The remainder of the port has subsequently been privatized and other Malaysian ports are going through a process of corporatization as a prelude to possible participation.

\textsuperscript{15} Andrew Hall, "An Australian Experience", Infrastructure Finance (Summer 1993).


\textsuperscript{17} Sara Khalil, op. cit.