

INFRASTRUCTURE DEVELOPMENT IN MALAYSIA:
THE RESPONSIBILITIES OF THE PUBLIC AND PRIVATE SECTORS

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1. Introduction

Until just about a decade ago the development and supply of infrastructure in Malaysia, as in most other countries, was almost entirely a public sector responsibility. In the mid-1980's, when it initiated its privatisation policy, the Malaysian government made known its intention to move away from this conventional approach towards the financing and management of infrastructure. Since then the scope for the private sector in areas that were previously the domain of the government has been considerably expanded. More than a decade after the commencement of the policy, private sector resources, both capital and manpower, now play a fairly prominent role in the supply of infrastructure as well as in their operation. And all indications are that the private sector's involvement in the development of infrastructure in Malaysia will grow.

This paper reviews some of the central issues in the development of infrastructure in Malaysia. After a brief survey of infrastructure development by the public sector during the pre-privatisation era, the discussion goes on to describe the growing importance of the private sector in the supply of infrastructure in the country. The discussion also covers the means and processes by which private sector involvement in infrastructure has taken place. It is generally acknowledged that Malaysia has been fairly successful in forging a partnership between the public and private sectors to develop infrastructure in the country. The reasons behind Malaysia's success in bringing about private sector participation in infrastructure provision are discussed in some detail. The changed role of the state in infrastructure is also addressed. The paper concludes with a tentative list of lessons from the Malaysian experience in fostering private sector investment in infrastructure development. The Malaysian

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experience, however, is no more than a broad indication of what may be possible in other developing countries.

2. The Public Sector in Infrastructure Development

The current enthusiasm of the Malaysian government for private provision of infrastructure facilities contrasts sharply with the predominant role played by the public sector in infrastructure supply before the implementation of the privatisation policy. For a proper appreciation of the of the significant developments in the Malaysian government's infrastructure policies since the mid-1980s, it is necessary to review the infrastructure priorities and strategies when the government was solely responsible for providing infrastructure in the country.

During the period when the government was responsible for providing infrastructure services — i.e. up to around 1985 — three broad considerations have had a bearing on the scale and pattern of infrastructure development. First there was the economic rationale for infrastructure development. There was the need to meet economic demands for infrastructure facilities, emanating from economic growth. However, during the 20-year tenure of the NEP (1971-90), the role of infrastructure came to be seen in a much wider socio-economic perspective. Under the broad ambit of the redistributive objective of the NEP, the development of infrastructure in the less developed regions and states was emphasised because infrastructure was regarded as being necessary to uplift the socio-economic conditions of the indigenous Bumiputera community. Finally, the need to promote national security has also had a bearing on the development of infrastructure in Malaysia and in particular in the development of roads. In short, the need to meet the growing demand for infrastructure facilities, the alleviation of poverty, the elimination of racial and regional economic disparities and the promotion of national security all impacted on the allocation, and distribution of infrastructure in Malaysia.

The allocation of development expenditure to the infrastructure sector is shown in Table 1. (The figures in the table up to 1985 broadly coincide with the period before the implementation of the privatisation policy.) That the government

accorded a very high priority to infrastructure development is evident from the fact that investment in the sector accounted for between 18 and 34 per cent of total development expenditures in the first four Plans. The importance accorded to infrastructure development by the Malaysian government is thus not in dispute. In fact the infrastructure sector has been an important, and in most Plans the largest, recipient of development funds.

Table 1
Development Expenditure on Infrastructure and Utilities, 1966-1995

	Total Expenditure (RM million)	Infrastructure (RM million)	%
First Malaysia Plan, 1966-70	4,550	1,538	34
Second Malaysia Plan, 1971-75	11,457	3,121	27
Third Malaysia Plan, 1976-80	36,722	10,724	29
Fourth Malaysia Plan, 1981-85	80,331	14,916	18
Fifth Malaysia Plan, 1986-90	63,950	12,115	18
Sixth Malaysia Plan, 1991-95	58,500	17,169	29

The vast amount of resources devoted to infrastructure up to 1985 — RM30 billion during the two decades of the first four Malaysia Plans — no doubt contributed to the growth of infrastructure stock and to its modernisation as well. By and large, the public sector had succeeded in making available sufficient infrastructure for national development. Road mileage in Malaysia, for instance, more than doubled between 1970 and 1985; national telephone penetration rate rose from one per 100 persons in 1970 to 6.1 in 1985; electricity generating capacity in 1985 was twelve times higher than the level in 1965 and capacity at Malaysian ports kept abreast of the growth of export and import traffic.

3. Towards a New Public-Private Sector Partnership in Infrastructure Development

Since the public sector had been quite successful in the development of infrastructure, to meet both economic and social needs, why then was it necessary to look towards the private sector to share with the public sector the responsibility for infrastructure provision? Also, looking at the specific circumstances of the time, in particular the commitment of the government to the

pursuit of the NEP, the privatisation policy meant nothing less than a dramatic reversal of the development strategy of the Malaysian government. There are no simple reasons for the sharp policy shift that the privatisation strategy signified. The following points, however, go some way towards explaining the rationale for the policy.

- (i) The high level of government participation in the national economy, largely in pursuit of the objectives of the NEP, saw a sharp escalation in the public sector deficit which in turn led to a huge increase in domestic and external borrowings during the period 1971-80. Even by the late 1970s, it had become manifestly clear that government revenues simply could not keep pace with the increases in expenditures implied by the high level of government involvement in the economy. A rollback of the public sector appeared quite inevitable.
- (ii) An important dimension in the expanding role of the public sector in Malaysia during the 1970s was the proliferation of public enterprises. The usual economic argument of market failure was not the only reason why the government established a growing number of public enterprises in Malaysia. Other factors unique to the country, such as the NEP, meant that SOEs were also seen a vehicle for spearheading Bumiputera participation in the commercial and industrial sectors. Though there were exceptions, the performance of SOEs was largely unsatisfactory. The growing dissatisfaction with the lacklustre performance of many SOEs — including those in the infrastructure sector — was to be a factor that pushed the Malaysian government towards privatisation.
- (iii) Finally, the international setting also cannot be discounted as a factor behind the Malaysian government's adoption of privatisation as a development strategy. The election of Margaret Thatcher in the UK and Ronald Reagan to the presidency of the US precipitated a global swing towards an open and liberal economic system. This trend was further supported by the World Bank and the Asian Development Bank that favoured privatisation projects.

For the reasons cited above, and probably others as well, Malaysia initiated a comprehensive privatisation policy of its own. The real beginning of the policy

was in 1983 when the Prime Minister announced national policies relating to the concept of 'Malaysia Incorporated'. The 'Malaysia Incorporated' concept viewed the country as a corporate entity in which the government provided the enabling environment in terms of overall macroeconomic management, but where the private sector assumed the role of the main engine of growth. 'Malaysia Incorporated' meant the progressive withdrawal of the state from direct participation in the economy and thus implied the downsizing of the public sector. Among others, the privatisation policy marked the commencement of a policy promoting private sector involvement in the development of infrastructure.

The government explained its views on privatisation explicitly two years later in the Economic Planning Unit's *Guidelines on Privatisation*, 1985. In the *Guidelines* the Malaysian government set out the following five objectives behind its privatisation policy:

- (i) to relieve the financial and administrative burden of the government,
- (ii) to promote competition, improve efficiency and increase productivity,
- (iii) to stimulate private entrepreneurship and investment to accelerate the rate of growth of the economy,
- (iv) to reduce the size and presence of the public sector in the economy,
- (v) to achieve the objectives of the NEP.

Since the inception of the privatisation policy some fourteen years ago, a large number of projects have been privatised by the federal government. Table 2 is a list of the major privatisation exercises in the country. If in the beginning the implementation of the policy was criticised as being ad hoc in nature, Malaysia's privatisation policy is now guided by the recommendations of the *Privatisation Masterplan* which was published in 1991. The Malaysian government's commitment to expanding the role of the private sector in the national economy is also reiterated very explicitly in its *Second Outline Perspective Plan*.

4. Private Sector in Infrastructure Development

Table 3 lists the cases of private sector provision of infrastructure in Malaysia. The one fact that emerges is that the government's privatisation policy ---- defined very broadly to include not only cases involving divestiture of equity but also

those of a non-divestiture nature — has been very prominent in the infrastructure sector. The vast majority of the privatisation exercises in Malaysia up to now have actually been in the infrastructure sector. Equally significantly, every component of the infrastructure sector has either seen private sector participation or has witnessed some form of sectoral restructuring leading to greater market discipline on the part of public sector suppliers of infrastructure services. What follows is a discussion of the status of private sector involvement in the different segments of the infrastructure sector. The description is necessarily brief and is intended to give no more than an overall idea of the extent to which the private sector has been allowed to supplement and even replace the government in the provision of infrastructure in Malaysia.

(i) Ports

In the ports sector the first privatisation initiative was the transfer, in March 1986, of the ownership and operation of the three-berth container handling facilities at Port Klang to a (newly-created) private company, the Kelang Container Terminal. The company has

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Table 2
Malaysia: Major Privatisation Projects

Privatised Projects	Year
Sistem Televisyen Malaysia Berhad (TV3)	1983
North Klang Straits Bypass	1984
Jln. Kuching/Kepong Interchange	1985
Sports Toto Sdn. Bhd.	1985
AIROD	1986
Malaysian Airlines System (MAS)	1986
Malaysian International Shipping Corporation (MISC)	1986
KCT (Port Klang)	1986
Tourist Facilities at National Park	1987
Marketing of Airtime, Radio Malaysia	1987
RISDA Marketing Activities	1987
Labuan Water Supply	1987
Semenyih Dam	1987
K.L. Interchange	1988
Tradewind	1988
North-South Expressway	1988
Maintenance of Tube Wells, Labuan	1988
Labuan Beaufort Interconnection	1989
Syarikat Gula Padang Terap Sdn. Bhd.	1989
Cement Manufacturing Sarawak	1989
Ipoh Water Supply	1989
Larut Matang Water Supply	1990
Government Security Printing	1990
Shah Alam Abattoir	1990
Lori Malaysia Berhad	1990
Edaran Otomobil Nasional	1990
Holiday Villages Sdn. Bhd.	1990
Cement Industries of Malaysia Berhad (CIMA)	1990
Pernas International Hotel and Properties Berhad	1990
Syarikat Telekom Malaysia Berhad	1990
Desaru International Resort	1992
KPM (Port Klang)	1992
Tenaga Nasional Berhad	1992
KTM Berhad (Malayan Railway)	1992
Malaysian Airports Berhad	1992
Light Rail Transit System I	1992
Light Rail Transit System II	1993
Second Link to Singapore	1993
Lumut Maritime Terminal	1993
National Sewerage System	1993
Johor Port	1993
Bintulu Port	1994
Penang Port	1994
Shah Alam Highway	1994
Seremban-Port Dickson Highway	1994
Johor Water Authority	1994
Pulau Pinang Water Authority	1994
KMT (Port Klang)	1994
KL-Karak Highway	1994
Butterworth-Kulim Expressway	1995
North-South Expressway Central Link	1995
New North Klang Straits Bypass	1995
Cheras-Kajang Highway	1995
Elevated Highway over Sg. Klang and Sg. Ampang	1996
Damansara/Puchong/Putra Jaya Highway	1996
New Pantai Highway	1996
Sungei Besi Road	1996
Pelabuhan Tanjung Pelepas	1996
Kuantan Port	1997

Table 3
Privatisation of Infrastructure — Status

Sector	Status	Method
<i>Ports</i>		
Klang Port		
Kelang Container Terminal (KCT)	Privatised (1986)	Divestiture
Kelang Port Management (KPM)	Privatised (1992)	Divestiture
Klang Multi Terminal (KMT)	Privatised (1994)	Divestiture & BOT
Johor Port	Privatised (1995)	Divestiture
Bintulu Port	Privatised (1993)	Corporatisation
Penang Port	Privatised (1994)	Corporatisation
Lumut Maritime Terminal	Privatised (1993)	BOOT
Pelabuhan Tanjung Pelepas	Privatised (1996)	BOOT
Kuantan Port	Impending (1996)	(Divestiture)
<i>Roads</i>		
North Klang Straits Bypass	Privatised (1984)	BOT
Jln. Kuching/Kepong Interchange	Privatised (1985)	BOT
KL Interchange	Privatised (1987)	BOT
North-South Expressway	Privatised (1988)	BOT
Second Link to Singapore	Privatised (1993)	BOT
Butterworth-Kulim Expressway	Privatised (1994)	BOT
Seremban-Port Dickson Highway	Privatised (1994)	BOT
Shah Alam Expressway	Privatised (1994)	BOT
North-South Expressway Central Link	Privatised (1994)	BOT
KL-Karak Highway	Privatised (1994)	BOT
New North Klang Straits Bypass	Privatised (1995)	BOT
Cheras-Kajang Highway	Privatised (1995)	BOT
Elevated H/way over Sg. Klang & Sg. Ampang	Privatised (1995)	BOT
Damansara/Puchong/Putra Jaya Highway	Privatised (1996)	BOT
New Pantai Highway	Privatised (1996)	BOT
Sungei Besi Road	Privatised (1996)	BOT
<i>Water Supply</i>		
Labuan Water Supply	Privatised (1987)	BOT
Ipoh Water Supply	Privatised (1989)	BOT
Larut Matang Water Supply	Privatised (1989)	BOT
Semenyih Dam	Privatised (1987)	Management Contract
Maintenance of Tube Wells, Labuan	Privatised (1988)	Management Contract
Johor Water Authority	Privatised (1994)	Corporatisation
Pulau Pinang Water Authority	Privatised (1987)	Corporatisation
<i>Power</i>		
Tenaga Nasional Bhd.	Privatised (1992)	Partial Divestiture
YTL – Paka & Pasir Gudang	Private IPP (1995)	BOO
SEV – Lumut	Private IPP (1995)	BOO
GSP – Sepang	Private IPP (1995)	BOO
PDP – Port Dickson	Private IPP (1995)	BOO
PSP-Powertek – Malacca	Private IPP (1995)	BOO
<i>Telecommunications</i>		
Telekom Malaysia Bhd.	Privatised (1990)	Partial Divestiture
Telecommunications Operators (10)	Privatised (1990)	Licences
<i>Others</i>		
KTM Berhad (Malayan Railway)	Privatised (1992)	Corporatisation
Malaysian Airports Berhad	Privatised (1992)	Corporatisation
National Sewerage System	Privatised (1992)	BOT
Light Rail Transit System I	Privatised (1992)	BOOT
Light Rail Transit System II	Privatised (1992)	BOOT

since been listed on the Kuala Lumpur Stock Exchange (KLSE). The second stage in the privatisation of Klang Port was in December 1992 when the remainder of the existing facilities at Port Klang, consisting of 22 berths, were privatised to Klang Port Management (KPM). The final stage in the privatisation of Port Klang occurred with the sale and lease of the facilities at West Port which the Klang Port Authority had been developing. This terminal was privatised in September 1994 to Klang Multi Terminal (KMT). With the privatisation of West Port all the three terminals at Port Klang, Malaysia's largest port, are operated by the private sector. The Malaysian government has also privatised Johor Port, another of the large federal ports in the country, by way of a divestiture exercise. In addition, plans are afoot to privatise three more substantial terminals in the country, these being Bintulu, Penang and Kuantan ports. While these ports have been corporatised and are now still wholly-owned by the government, plans are underway to divest their equity to the private sector. The government's port privatisation policy has therefore left only one of the six federal ports in the country — the relatively new Kemaman Port Authority — yet to be corporatised or privatised.

As of now all the privatisation exercises in the ports sector have meant the sale of existing public sector facilities. A new and significant development in the sector is that whereas in the past ports were developed by either the federal or state governments it would seem that all new port infrastructure in Malaysia would henceforth be undertaken by the private sector. The decision to allow a private company to develop a port facility at Lumut is the first instance of the private sector being permitted to build and operate a common-user port facility in the country. This is a clear break from past practice and introduces a completely new facet to the privatisation of port development in the country. Similarly, in the privatisation exercise of West Port, the future development of the terminal has been privatised on a Build, Operate and Transfer (BOT) basis to KMT. The development of a huge new facility in Johor, the Tanjung Pelepas Port, is another example of allowing the private sector to finance the construction and operation of new ports. In short, the development of ports in Malaysia, unlike in the past, would in future be a private sector responsibility.

(ii) The Roads Sector

As in most other countries, the financing of road construction and maintenance has traditionally been a public sector responsibility in Malaysia. The roads sector has also been the principal recipient of development funds allocated for the transport sector. With the commencement of privatisation, however, a policy of awarding concessions to private companies for the construction and operation of toll roads was introduced in the mid-1980s. In fact the roads sector has become an important target of the government's privatisation policy. As of now more than ten road projects have been privatised as BOT projects of which the most important is the North-South Expressway project awarded to a private company in 1988. The 869km Expressway, completed in early 1994 at a total cost of RM6 billion, spans the entire west coast of Peninsular Malaysia from the Thai border in the north to Johor Bharu in the south. The North-South Expressway, the longest highway in the country, is also the most important component of Malaysia's road system.

The other major privatised highway projects include the Shah Alam Expressway, the Seremban-Port Dickson Highway, the Second Link to Singapore, the North-South Expressway Central Link and the KL-Karak Highway. Since the beginning of the Seventh Malaysia Plan in 1997 there has been an upsurge in the roads privatisation programme. The latest road projects that have either been privatised or are in the process of being privatised are the Butterworth Outer Ring Road, an elevated highway over Sg. Klang, New North Klang Straits Bypass, the Kuala Lumpur City Centre Road Infrastructure Projects and the East Coast Expressway. These are only examples of what would almost certainly turn out to be a long list of privatised road projects.

(iii) Utilities: Telecommunications and Power

The power and telecommunications sub-sectors in Malaysia have also witnessed the entry of a substantial amount of private capital. Reform in the utilities' sub-sector has taken two forms. First, the power and telecommunications industries have been unbundled to allow private sector entry into those areas where provision in a non-monopolistic manner is feasible. The second plank of the Malaysian government's reform programme for the power and

telecommunications sub-sectors has been the privatisation of the erstwhile state-owned power and telecommunications monopolies.

The power sector has been *vertically* unbundled and there is now substantial private sector participation in power generation in Malaysia. Since September 1992 six Independent Power Producers (IPP) projects have been commissioned by the Malaysian government. The IPPs would sell their electricity production via power purchase agreements with TNB. The five IPPs that are already in production account for nearly 40 per cent of the generation market. The private sector is, therefore, already an important supplier of power in Malaysia.

In contrast to the power sub-sector, the telecommunications industry has been *horizontally* unbundled to facilitate private sector entry. Whereas in the past, telecommunications services were provided by a state-owned monopoly, there is now a considerable amount of private sector participation in the provision of telecommunications services. In all segments of the industry — fixed line, cellular and payphone markets — there are private firms involved in the provision of telecommunications services. In the telecommunications sub-sector what is much more significant than private sector participation is the government's policy of creating competitive markets in the various segments of the industry.

The second component of the reform programme for the utilities sub-sector has been the privatisation of the power and telecommunications through State Owned Enterprises (SOEs). Prior to the privatisation programme of the government, power and telecommunications services were provided by state-owned monopolies, the National Electricity Board and the Telecommunications Department, respectively. The utilities have since been privatised. In both cases, the SOEs were, in the first instance, transformed from a government department or statutory body into a limited company via corporatisation before the equity in them was partially divested by way of a listing exercise on the KLSE.

In summary, in the utilities sub-sector, reform has not only taken the form of privatisation of the SOEs but, equally significantly, has also involved unbundling of the sector and liberalisation of entry to facilitate the infusion of private capital funding.

(iv) Other Infrastructure

A number of other infrastructure projects have also been privatised. The more important ones are shown in Table 3. Some interesting projects are :-

- (a) The two light rail transit (LRT) systems for the federal capital of Kuala Lumpur which are large privatised projects. In both LRT 1 and LRT 2 the concession period is 60 years, and is renewable for an equivalent period on a commercial basis.
- (b) The construction and operation of a national sewerage system. The privatisation exercise was effected through a BOT concession agreement between the government and a private company, Indah Water Konsortium in December 1993. Upon completion of the RM6.2 billion project, the coverage of the national sewerage system would be 100 per cent.
- (c) Water supply is another area of infrastructure where the government has encouraged private sector participation. Thus far, however, the privatisation of water supply services has mainly involved water treatment plants. The Works Ministry has indicated its desire to see more comprehensive privatisation programmes
- (d) The country's airports, which were previously operated by the Department of Civil Aviation of the federal Ministry of Transport, were corporatised into Malaysian Airports Berhad (MAB) in 1992. The equity of MAB would be eventually divested either by private placement or via a public floatation exercise.
- (e) The government-owned railway company too has not escaped the privatisation drive. Keretapi Tanah Melayu Berhad (KTMB) was incorporated under the Companies Act and in August 1992 it officially took over the operations of the former Malayan Railway. The privatisation of the Malayan Railway has stopped at the corporatisation stage but plans to sell the KTMB to private investors is at an advanced stage.
- (f) Another example of private sector involvement in infrastructure development is the case of the Bakun Dam hydro-electric project in the state of Sarawak. Expected to cost RM15 billion, the Bakun Dam project is, by far, the largest privatised project to date in Malaysia.

(v) Social Infrastructure

Although the main concern of this paper is with economic infrastructure and utilities it is important to bear in mind that the Malaysian government's privatisation initiative also encompasses social infrastructure. This is most evident in the education and health sectors.

- (a) In the education sector government efforts are increasingly being supplemented by the private sector. Private sector participation at the tertiary level started when local private sector institutions began providing twinning programmes with foreign universities. This is now being complemented by private universities and branch campuses of foreign universities. The latter have been made possible by the Private Higher Educational Institutions Act, 1996. As part of the reforms, the University and University Colleges Act, 1971, was amended in 1995 to enable public institutions of higher learning to be corporatised. As in the case of economic infrastructure, the corporatisation of local universities is intended to provide the management of these institutions greater autonomy to manage their institutions in a more dynamic and proactive manner. The University of Malaya is the first local institution of higher education to be corporatised.
- (b) As in the education sector, the privatisation strategy in the health sector is also two-pronged. The first approach of the government has been to licence the establishment of private hospitals. As a result the private sector is playing an active role in complementing public health services, particularly in the field of curative services. The second component of the government's privatisation policy in the health sector is the corporatisation and privatisation of hospitals. This is to be effected during the course of the Seventh Malaysia Plan (1996-2000).

From the discussion in this section, it is clear that the conditions under which infrastructure services are provided in Malaysia are clearly-very different now from what they were about ten years ago. Private sector provision of physical infrastructure is now quite extensive and encompasses, *inter alia*, ports, roads, power and telecommunications services, urban infrastructure, water supply, sewerage and even hydro-electric generation. The entry of the private capital into physical infrastructure development and the exposure of some of the SOEs

involved in the provision of infrastructure services to competition, as in the power and telecommunications sub-sectors mean that there have been important changes in the way infrastructure services in Malaysia are being financed, produced and delivered. Hence the operation of existing infrastructure facilities are progressively being transferred to the private sector and the development of new infrastructure is also increasingly being undertaken by the private sector.

5. Mechanisms of Private Sector Participation

Private provision of infrastructure can be effected in various ways and choosing the right mechanism for private participation is important in ensuring the success of the policy. In the privatisation of its infrastructure, the Malaysian government has resorted to a range of techniques that include both the divestiture and non-divestiture options. Corporatisation, an example of the latter approach, is being frequently employed in the reform of SOEs in the Malaysian infrastructure sector. Of the public enterprises in the infrastructure sector that have been corporatised, the prominent ones are the MAB, KTMB (the Malayan Railway) and Bintulu and Penang ports. The corporatisation of a SOE frees the entity from bureaucratic and other constraints and thus provides its management with greater flexibility and autonomy, than a government enterprise, to respond to changing market conditions. Corporatisation is, therefore, a form of marketisation or commercialisation of a SOE. Corporatisation in Malaysia is often the precursor to the eventual divestment, partial or complete, of the shares in the SOE by the government. This was, for example, the case with the privatisation of the telecommunication and power utilities in Malaysia and of some of the ports. From past practice in the utilities sector and elsewhere, the equity of the MAB and KTMB as well as the corporatised ports would be eventually divested (partially or completely), either by way of a negotiated sale to private sector companies, as has happened in the cases of KCT and KPM, or by a public flotation exercise which was the path adopted in the privatisation of the telecommunications and electricity utilities.

The concession agreement is another common technique of sector reform and in Malaysia is usually employed in the development of new or greenfield infrastructure projects. Concessions can take various forms, the most common being the Build-Operate-and-Transfer (BOT) agreement. The privatisation of

roads in Malaysia is being done through the BOT method. Each of the BOT road projects in Malaysia has involved a concession agreement between the government and a private company, under which the latter would finance the construction of the road and operate it for a specified period. The private company is allowed to collect tolls over the whole of the concession period. At the end of the concession period, the road would revert to public sector ownership. Roads have not been the only segments of the infrastructure sector where the BOT method, or some variation of it, has been employed. The national sewerage project and a number of water supply agreements are also BOT arrangements. The privatisation of West Port in Port Klang to KMT is substantially on a BOT basis. The two LRT projects in Kuala Lumpur have been privatised on a variation to the BOT concept. They are being developed as 'Build-Own-Operate-Transfer' (BOOT) projects under a 60-year concession agreement. In contrast, The IPP projects in power generation are 'Build-Operate Own' or BOO schemes.

Notwithstanding the popularity of corporatisation and of BOT projects in Malaysia, the most authentic form of privatisation is obviously denationalisation or divestment. In the privatisation of the infrastructure sector in Malaysia, there are instances of total divestiture (such as the privatisation port facilities to KPM, KMT and Johor Port Sdn Bhd). The KCT privatisation exercise, on the other hand, is an example of partial divestiture. The privatisation of TNB and Telekom Malaysia also involved only partial divestiture.

The substantive role now being played by the private sector in infrastructure development is not only the result of concessions granted to the private firms to develop infrastructure, such as toll roads, and the sale to the private sector of infrastructure SOEs like Telekom Malaysia, Tenaga Nasional and the ports. A very important avenue for private sector entry into the infrastructure sector has also been provided by the deregulation initiatives of the Malaysian government in the various segments of the infrastructure sector. The deregulation of the power and telecommunications sub-sectors, essentially involving the dismantling of entry controls into the industries, has deepened private sector participation in these two industries. Deregulation has also provided a window of opportunity for private sector participation in the provision of social infrastructure. The

development of private health care facilities and of private universities are obvious examples. Deregulation, therefore, should be seen as a crucial component of the Malaysian government's reform programme for infrastructure. It also constitutes the principal mechanism for creating competitive market in the provision of infrastructure services and is thus a better mechanism for efficiency gains than the mere sale of SOEs to the private sector or the concessioning of private firms to supply infrastructure.

What is clear from the preceding discussion is that there are numerous ways of bringing about private participation in the provision of infrastructure. The Malaysian government has employed a wide range of methods to induct private sector financing of infrastructure. Obviously some mechanisms are better for some sub-sectors whilst other approaches may be more suitable for other infrastructure industries. The judicious use of the array of available options is a feature of the Malaysian government's privatisation of the infrastructure sector.

6. Private Sector in Infrastructure: An Assessment

As stated at the outset of this paper, up to a decade or so ago, there was virtually no private sector involvement in the financing of infrastructure development and in the production of infrastructure services. This was true of transport and other economic infrastructure and the utilities, as well as in the social sectors like health and education. With the implementation of the privatisation policy the situation has changed significantly. But how important is the private sector in infrastructure provision? The general and inescapable observation is that in each and every component of the infrastructure sector, there is some amount of private capital and enterprise. In some segments private sector participation is quite substantial whilst in others the public sector still retains its status as the primary source of infrastructure services.

In the case of roads, the length of the privatised highways is still less than two thousand km., but the significance of private sector involvement in the roads sector goes well beyond the less than three per cent share of the country's road network that privatised roads currently command. First, the privatised roads constitute the critical portions of the Malaysian road system. In fact since about 1990, all the economically important segments of the highway network in

Malaysia, including the North-South Expressway, have been constructed and operated by the private sector under BOT concession agreements with the government. Second, in terms of the total investment in the road system, private capital is already an important source of funding for road development. Up to now, the resources already committed by the private sector on the country's road system is well in excess of RM12 billion. This compares with a total public sector allocation of RM9 billion for road development in the Sixth Malaysia Plan (1991-95). Significantly, in Malaysia even those roads that are not financially viable candidates for privatisation may be privatised with the government providing financial incentives to entice private investors. Based on what has occurred up to now it is entirely possible that in future the public sector's role in the provision of road services will be considerably reduced and be confined to the construction of development and rural roads.

As for the ports sub-sector, until a couple of years ago only the container facilities at Port Klang had been privatised as KCT. Since then the remaining facilities at the Port as well as new facilities that are being built there have been privatised.

— Cargo handling at Port Klang, Malaysia's largest terminal, is now being undertaken by three private companies. With the privatisation of Johor Port as well as the impending sale to the private sector of the federal ports of Penang, Kuantan and Bintulu within the next year or so, the privately operated ports in Malaysia would cater for well over three-fourths of the total throughput of Malaysian ports. That the private sector would become the principal providers of port services in the country is also evident from the fact that all new development of port infrastructure in Malaysia is being entrusted to the private sector.

In the power and telecommunications sub-sectors too there is significant private sector presence. In the power sub-sector IPPs already have a substantial share of the generation market and with the completion of the Bakun Dam project in Sarawak private producers would be the main source of power generation in the country. In telecommunications private firms would be solely responsible for all future expansion and modernisation of the industry.

The situation in the social sectors is somewhat similar to what has been happening in economic infrastructure. In the education sector, for example,

enrolment at private tertiary educational institutions has been growing sharply since the start of reforms in the sector. In 1995 enrolment in private tertiary institutions already constituted 25 per cent of total enrolment in tertiary education in local and private institutions. As for the health sector, during the Sixth Malaysia Plan, the number of private hospitals increased from 174 in 1990 to 194 in 1994. In 1994, beds in private hospitals comprised over 15 per cent of the total number of hospital beds in the country.

The contribution of the public and private sectors towards infrastructure development can also be ascertained from their relative shares in financing infrastructure. Before the Malaysian government embarked on its economic liberalisation programme, that has included the privatisation of infrastructure SOEs and deregulation of the various infrastructure sub-sectors, investment in infrastructure in the country was entirely financed by the public sector. However, as a consequence of the Malaysian government's privatisation policy and entry liberalisation, the role of the private sector in financing infrastructure development has certainly grown quite significantly. Up to the Fourth Malaysia Plan (1981-85) investment in infrastructure in Malaysia was completely financed by the public sector, comprising the federal government and the state governments, the local authorities and the infrastructure SOEs. During the decade of the next two Plans (1986-95) the private sector was allowed to play an increasingly bigger role in infrastructure development. While the amount of private sector resources invested in the infrastructure sector during the Fifth and Sixth plans cannot be accurately ascertained, the planned allocation during the current Plan (the Seventh Malaysia Plan) provides clear proof of the significant change in the respective role of the public and private sectors in financing infrastructure development. (Table 4). The role of the public and private sector has changed so much that for the period 1996-2000 (coinciding with the Seventh Malaysia Plan) the private sector is set to actually spearhead infrastructure development in the country. Specifically, during the Plan period the private sector is expected to invest RM68.3 billion in the infrastructure sector. This is three and a half times the RM19.2 billion that the public sector plans to spend on infrastructure development during the same period. In other words, private sector financing would constitute almost 80 per cent of total investment in infrastructure in the five

years of the Plan. Compared to the situation up to the mid-1980s private sector now plays a dominant role in infrastructure development in Malaysia.

Table 4
Development Allocation for Infrastructure and Utilities, 1991-2000
(RM million)

	6MP		7MP
	Allocation	Expenditure	Allocation
PUBLIC SECTOR			
Transport	12,881.6	11,594.7	15,484.2
Roads ^a	8,451.0	7,572.6	9,838.8
Rail	1,802.6	1,735.4	3,370.0
Ports	434.0	410.9	486.8
Airports	1,833.0	1,780.6	1,266.0
Urban	361.0	95.2	522.6
Utilities	2,876.3	2,796.7	3,687.3
Water Supply	2,749.5	2,671.9	3,575.3
Sewerage	126.8	124.8	112.0
Communications	76.3	71.0	58.6
Telecommunications and Posts	45.0	39.9	25.5
Meteorological Services	31.3	31.1	— 33.1
Total	15,834.2	14,462.4	19,230.1
PRIVATE SECTOR (PRIVATISED PROJECTS)			
	—	—	Investment
Roads			17,505.0
Ports			4,241.7
Airports			5,956.0
Telecommunications			25,400.0
Postal Services			260.0
Water Supply			2,571.7
Sewerage			1,759.4
Rail			10,600.0
Total			68,293.8
Grand Total			87,523.9

Note: ^a Excludes localized roads in regional development areas, some local authorities and agricultural roads which have been allocated RM700 million.

Source: Seventh Malaysia Plan, 1996-2000.

It is obvious that every component of the infrastructure sector has to some extent or other been affected by the government's privatisation drive. At one extreme, privatised firms are now the sole suppliers of some categories of physical infrastructure and infrastructure services. In others the private sector's role is increasing whilst that of the public sector is on the decline. In actual fact the

government's privatisation policy is most evident in the infrastructure sector with the result that private capital is playing an increasingly important role in the development of all categories of infrastructure in Malaysia.

7. Direct Benefits To Government

Inducting private sector resources into infrastructure via privatisation and other sectoral reform programmes has been, on the whole, beneficial to the Malaysian economy. This can be seen from at least three perspectives.

- (i) *Size of government bureaucracy.* It has often been asserted that an important benefit of Malaysia's privatisation policy is the reduction in the administrative burden on the government. That the privatisation of infrastructure has reduced the size of the government bureaucracy is not in doubt. In a recent estimate, the total number of government personnel transferred to the private sector as a result of privatisation has been put at 93,000 workers. In a public sector, with a total labour force of about 800,000, the impact of the privatisation of infrastructure on total public sector employment is not, by any measure, insubstantial.
- (ii) *Reduction in financial burden.* The rollback of the public sector in infrastructure via privatisation and private sector entry into areas previously exclusively the domain of the government could also be credited with having reduced the government's financial burden. On estimate has it that from its launch in 1983 to 1992, privatisation has saved the government RM38 billion in investment expenditure. In addition, privatisation is also estimated to have saved the Malaysian government RM4.8 billion in operating expenditures over a three-year period in the 1990s. Finally, incomes from the sale of assets in the SOEs up to 1992 have amounted to RM8.6 billion. Clearly then privatisation and regulatory reform in the infrastructure sector must have contributed substantially to the reduction in the financial burden on the government.
- (iii) *Externalities* Apart from overcoming the resource constraints in expanding and modernising the sector, privatisation can also bring about important externalities for the economy. And these might yet turn out to be the most important benefits from privatisation. The externalities associated with privatisation include such long-term effects as the enhanced dynamism of

the economy as a result of a larger private sector and the benefits from an international perception of an improved investment climate in the country. Another possible externality is a strengthening of the local capital market. Privatisation has already contributed in a big way to the broadening and deepening of the KLSE. There are now more than twenty privatisation issues listed on the Exchange. The externalities associated with privatisation are difficult to measure but they are important considerations in any comprehensive assessment of the government's privatisation policy.

8. Managing the Process

There are a number of factors that have contributed to the successful induction of private sector resources — both capital and manpower — into infrastructure provision and management. No one factor, however, was solely or even substantially responsible for the success with which the government has managed the transition (from public sector dominance to the present situation where the major responsibility for infrastructure development and operation is actually being borne by the private sector.) Among the ingredients for success, the following would be the more important.

- (i) *Political Commitment.* An important reason for the success of Malaysia's privatisation policy is the political commitment to the policy by the country's political leadership, and particularly Prime Minister Dr. Mahathir Mohamad. Also the emphasis that the Malaysian government has attached to the economic and social development, right from the very outset as an independent nation, has been a factor behind the success of all of the government's development strategies, including privatisation.
- (ii) *Structured Policy Framework.* The formulation and implementation of the privatisation policy in Malaysia has been very well planned. First, the 'Malaysia Incorporated' idea which promoted the private sector to be the primary agent of development was intended to bring about a change in the mind-set of the government machinery and the population. In the context of a 20-year development strategy of the NEP that had promoted an active role for the government in the development process, the 'Malaysia Incorporated' concept was clearly necessary to initiate privatisation. The

second step in the formulation and implementation of the policy was the publication of the *Guidelines on Privatisation* by the EPU. The document articulated the rationale for the policy and at the same time was meant to allay fears that the redistributive objectives of the NEP were being discontinued. Third, The *Privatisation Masterplan* was prepared to ensure a proper and well-structured implementation of the policy. Finally, the government established a high-powered Privatisation Unit in the EPU to oversee the implementation of the policy. The Privatisation Unit is a sort of 'one-stop' agency for the execution of the policy. The Unit is also entrusted with the task of continuously updating the *Privatisation Masterplan*.

- (iii) *Skilled Government Machinery*. It is generally acknowledged that to induce the active participation of the private sector in infrastructure development projects, governments in developing countries must be competent in managing the process of privatising the sector. In particular, the civil service should possess adequate skills for formulating and implementing privatisation policies, such as entering into agreements with the private sector and ensuring compliance of contracts. Also, they are expected to have the requisite skills for undertaking policy analysis and instituting necessary reforms, including possible deregulation of the infrastructure sector. In this regard, the Malaysian civil service has been especially fortunate in that it has been able to acquire the necessary range of management and policy skills through extended training and human resource development. As early as the 1970's the Malaysian government recognized and attended to the need for its civil servants to be continuously trained in new management and policy functions over the course of their careers that made them more skillful and technically more competent.
- (iv) *Administrative Reforms*. Specific administrative reforms were introduced into the bureaucracy as far back as 1967. The thrust of the exercise was to make the civil service more responsive and more competent. The establishment of the Malaysian Administrative Modernization and Manpower Planning Unit (MAMPU) in 1977 gave further impetus towards bureaucratic reforms. MAMPU was to carry out administrative reforms in field administration, state administration and federal –level administration.

It was also to provide consultancy services to government organisation, especially, in terms of computerization. In addition a Master Plan for manpower planning and budgeting was mooted at the national level.

The introduction of Client Charter (June 1993) and the revised salary given to the civil servants under the New Remuneration System (NRS) motivated the civil service further. Senior civil servants now enjoy remuneration packages very near market-rate. Consequently, the Malaysian civil service today is very efficient and highly motivated compared to other civil services in Southeast Asia. Thus government plans can be efficiently translated by the public services.

- (v) *Privatisation Mechanisms.* There are a number of ways by which private sector resources can be induced into the infrastructure sector. The effective implementation of a privatisation strategy requires the government to choose the appropriate mechanism among those at its disposal. From the discussion in the earlier parts of the paper, it is evident that the Malaysian government has employed various approaches to effect private sector participation in infrastructure development, employing the method that is particularly suited to the infrastructure facility in question, given the latter's technology and circumstances. Another facet of the Malaysian government's judicious and flexible approach towards encouraging the private sector to participate in infrastructure development is the provision of soft loans, traffic volume guarantees (for the BOT road projects) and exchange rate guarantees. Obviously where private sector interest in an infrastructure project cannot be solicited purely on the basis of the commercial merits of the project, the use of such devices may be necessary to entice private capital. Another matter of some importance is the way the Malaysian government handles the workforce in the SOEs earmarked for privatisation. In Malaysia, the government has adopted a number of strategies to obtain the support and consent of workers. First, employees are given an option to choose to join the privatised entity or remain with the government. Second, those who opt to join the private company are guaranteed employment by the private firm for a period of five years on terms and conditions no less inferior to those they currently enjoy. Third, employees who choose to join the privatised company would also not lose

their accumulated pension benefits. Lastly, the workforce is allowed a 5 per cent stake in the privatised SOE.

- (vi) *Economic Environment.* A principal factor behind the success of Malaysia's privatisation policy is the existence of general economic conditions conducive to private investment in infrastructure. There are a number of inter-related matters here. First, Malaysia has always had a vibrant private sector even during the period when there was extensive state intervention in the economy. That the Malaysian government never embarked on a policy of nationalisation and the fact that the economy has always been an 'open' economy meant that the country was perceived as being 'business friendly'. Second, the generous investment allowances enhanced the attractiveness of the country to domestic and foreign investors. Third, and a factor whose importance to a successful privatisation policy cannot be underestimated, is the existence of developed financial and capital markets. Malaysia's relatively developed financial and capital markets have certainly helped the private sector to mobilise the huge amount of resources required for investment in the infrastructure sector. Furthermore, the sources from which loans and equity may be mobilised and the instruments by which the private sector can marshal these resources are being continuously expanded in Malaysia. The part played by the Malaysian capital market as a source of finance for private firms in the infrastructure sector is set to gain in importance. This follows the amendments (in October 1995) to the Securities Commission Act of 1993 which relaxed the terms and conditions for the public offer and public listing of infrastructure project companies (IPCs). Under the new guidelines, the IPCs are eligible to be listed on the KLSE without having to meet its track record requirements. This is certainly a boost to private sector investment in infrastructure. Finally, the availability of skilled manpower in the private sector has also facilitated the entry of private firms into the infrastructure sector.
- (vii) *Vision 2020.* The formulation of Vision 2020 by the Prime Minister in 1991 provides for a more conducive environment for the privatization exercise and the growth of various sectors of the economy. The main objective is to

make Malaysia an industrialized society by the year 2020. The role of the private sector in the growth of the economy is further enhanced under this vision.

8. The Changed Role of the State

Privatisation of infrastructure has important implications on the role of the state in the sector. If in the past, the government was the sole provider of infrastructure, privatisation and deregulation mean the emergence of a shared responsibility with the private sector for the supply and management of infrastructure. For as long as the state was the sole provider of infrastructure, the central questions of how much of infrastructure to produce, the quality of infrastructure services and the level of user fees were all internal matters for the government to decide. In the situation where the government is the supplier of infrastructure the government, in a sense, regulates itself.

The situation, however, is different when the private sector is inducted to also provide infrastructure. In this situation the state is not only a provider of infrastructure, it also acquires new functions as a regulator of the private providers of infrastructure. There are two sets of issues here as far as the role of the state is concerned.

The first matter relates to the question of which infrastructure markets should the state serve. Generally where a comprehensive privatisation policy is being implemented, the state should confine itself to two categories of infrastructure. The first is those infrastructure in which the private sector sees no commercial potential. In other words public sector provision would be confined to those infrastructure that need to be subsidised. The advantage of separating the commercially viable infrastructure from the non-profitable ones (with the private sector providing the former and the public sector supplying the latter) is that state subsidies for infrastructure is now more specifically targeted to those regions or population groups that truly need to be subsidised. There are many examples from the Malaysian infrastructure sector. Continued provision of public hospitals, scholarship funds for students entering corporatised state universities, alternatives to toll roads, rural roads etc. are some of the examples. The other

segment of infrastructure where the public sector would continue to have a role is in the development of new and technologically advanced infrastructure which, for any number of reasons, private sector capital perceives to be either too risky or to have too long a gestation period. The Multi-Media Super Corridor (MSC) in which the Malaysian government is actively involved as an investor and as a catalyst is one example.

The next set of issues relates to the role of the state when infrastructure is provided by the private sector. Clearly, in this scenario the government acquires a new responsibility, viz. the government is now also a regulator of private providers of infrastructure. As a general proposition, the more competitive a particular infrastructure market, the less the regulatory burden on the government. But where the private providers of infrastructure have some measure of market power — roads, sewerage and power in Malaysia — then the government has a clear regulatory function to perform. (Even where the market is competitive the government still has a regulatory function especially if there is a need to coordinate the private firms in the industry. This is the case in network industries like telecommunications and power.) One regulatory question is the choice of regulatory institutions. (Who should regulate?) In Malaysia the institutional framework for regulation of infrastructure is still evolving. The next matter is what to regulate. Normally, the scope of regulatory action would include prices or user fees, service quality, safety and environment.

In Malaysia regulation of privatised infrastructure is still in a state of evolution. As of now only very basic regulatory institutions are in existence. In the absence of truly independent regulators, the tutelage ministries are closely involved with the regulation of the private providers of infrastructure. It is only recently that the Malaysian government commissioned a study on regulatory systems for private sector infrastructure. The absence of effective regulation over the infrastructure sector in Malaysia — a frequent criticism of consumers — would hopefully be resolved in the near future.

9. Lessons from the Malaysian Experience

Since the policy was initiated in the mid-1980s a fairly significant segment of the infrastructure sector of Malaysia has been privatised. Infrastructure has actually

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List of Abbreviations

AIROD	Aircraft Inspection and Repair Overhaul Depot
BOT	Build, Operate and Transfer
BOOT	Build, Own, Operate and Transfer
CIMA	Cement Industries of Malaysia Berhad
GNP	Gross National Product
IPC	Infrastructure Project Company
IPP	Independent Power Producer
JPSB	Johor Port Sdn Bhd.
KCT	Kelang Container Terminal
KL	Kuala Lumpur
KLSE	Kuala Lumpur Stock Exchange
KMT	Klang Multi Terminal
KPA	Klang Port Authority
KPM	Klang Port Management
KTK	Konnas Terminal Kelang Sdn. Bhd.
KTMB	Keretapi Tanah Melayu Berhad (Malayan Railway)
LLM	Lembaga Lebuhraya Malaysia (Malaysian Highway Authority)
LRT	Light Rail Transit
MAB	Malaysia Airports Berhad
MAS-	Malaysia Airlines
MISC	Malaysian International Shipping Corporation
MSC	Multi-media Super Corridor
NEP	New Economic Policy
NKVE_	New Klang Valley Expressway
NSECL	North-South Expressway Central Link
PLUS	Projek Lebuhraya Utara-Selatan (North-South Expressway Project)
RISDA	Rubber Industry Small Holders Development Authority
RM	Ringgit Malaysia (RM2.5 = US\$1)
RTM	Radio and Television Malaysia
SOE	State Owned Enterprise
UEM	United Engineers Malaysia