Chapter 5

THE PRESENT CHALLENGES AND FUTURE STRATEGIES TOWARDS ROAD DEVELOPMENT

5.1 Sustainable transport development

5.1.1 Definition

According to the World Commission on Environment and Development Report (1987: 7), sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The WCED's definition does not only stress the need for long-term development but also the recognition of the impact of developmental activities on the environment.

Adams (1990) argues that in order to understand and appreciate the concept of sustainable development, we need to look at the evolution of development: the changes in thinking and practice of people towards development. In addition, poverty reduction through economic redistribution (Growth-with-Equity) has been viewed as part and parcel of sustainable development. This view is mostly being held by environmentalists and activists who argues that if poverty among the poor is not reduced, their economic activities like felling trees to grow food crops, urban slums and pastoralism will create more
adverse effects on the environment (Desai, 1995). Desai further notes that in the broadest sense, development can be considered sustainable if it can be continued "forever".

Thus, using Desai's notion of "continuous development", sustainable transport development is about establishing an affordable, well maintained, reliable, safe, efficient and effective transport system to facilitate economic development. Of course, it is an ongoing process and the environmental concerns must be considered during the formulation and implementation stages of various transport programmes.

The future transport needs should also be forecasted although making predictions may not be easy. But since the future is never independent of the present, changes which are taking place now definitely have future implications. Furthermore, "momentum is often inherent in the ways policies develop and future initiatives frequently follow on from policies now being implemented"(Thord, 1993: 48).

Since road transport provides the major avenue for mobility of people and goods in the developing world (Heraty, 1987), it would be important to keep it up with future transport demand. Unfortunately, in many developing countries this has not been the case. Heraty attributes Third World's poor
road transport to lack of resources, institutional defects, poor maintenance culture and planning.

5.1.2 Road maintenance

Road maintenance and upgrading is one of the most important issues in the sustainable transport development. If roads are left un-maintained, they may in future cost the country heavily in terms of financial resources and economic expansion. According to the study which was conducted in 1984 in the Sub Saharan Africa, over 40% of the highways required some degree of reconstruction, and 30% of roads were receiving no maintenance at all, having been virtually abandoned (Heraty, 1987). Yet, the World Bank's World Development Report (1994) reveals that "a well maintained paved road surface should last for ten to fifteen years before needing resurfacing, but lack of maintenance can lead to say, severe deterioration in half that time." The Report continues to say that "the rates of return from World Bank assisted road maintenance projects are nearly twice those of road reconstruction projects. Timely maintenance expenditure of US$12billion would have saved road reconstruction of US$45billion in Africa in the period 1984-1994." (World Development Report, 1994: 4)

Over the years, governments have been shouldering the responsibility of financing, constructing, maintaining and upgrading roads. This responsibility, however, has of recent been reduced due to the involvement of
the private sector in road development (Havelka, 1990). The World
Bank's World Development Report (1994) notes that the recent changes in
national policies towards road development in the developing world have
reflected "government's performance" in providing infrastructure. The
Report further states that in order to establish a sustainable approach towards
infrastructure provision, the following issues need to be pursued.

a) Manage infrastructure like a business, not as a bureaucracy

In here, the provision of infrastructure should be conceived and managed as a
service industry that respond to customer demand. Private sector
involvement in management, financing, or ownership will in most cases be
needed to ensure a commercially oriented infrastructure.

b) Introduce competition directly if possible, indirectly if not.

Competition gives consumers choices for better meeting their demands and
puts pressure on suppliers to be efficient and accountable to users.
Competition can be introduced directly by liberalising entry into activities that
have no technological barriers, and indirectly, through competitive bidding for
the right to provide exclusive service where natural monopoly conditions
exists and liberalising the supply of service substitutes.
c) Give users and other stakeholders a strong voice and real responsibility

Users and other stakeholders should be represented in the planning and regulation of infrastructure services and in some cases they should take major initiatives in design, operation and financing.

d) Public-Private partnership in financing have promise

Private sector involvement in the financing of new capacity is growing. The lessons of this experience are that governments should start with simpler projects and gain experience, investors' returns should be linked to project performance, and any government guarantees needed should be carefully scrutinised.

e) Limiting government role in infrastructure

Government's efforts should be focused on creating policy and regulatory frameworks that safeguard the interests of the poor, improve environmental conditions, and coordinate cross-sectoral interactions interactions—where services are produced by public or private providers.

5.1.3 Contracting routine and periodic road maintenance

One of the areas in which private sector initiatives have been employed recently in the developing world is routine and periodic road maintenance through contracting. According to the study which was conducted under
the sponsorship of a German donor agency (Gesellschaft für Technische Zusammenarbeit-GTZ) in Brazil, Argentina, Colombia, Costa Rica, Nigeria, Ghana, Central African Republic, Kenya and Yugoslavia, the method of contracting road maintenance was found to be effective (Havelka, 1990). The study also concluded that contracting road maintenance has the following advantages: (a) strong incentives for improvements in performance and economy; (b) a more flexible operating environment in terms of managing resources, including greater flexibility in scaling resources to suit changing demands, thus facilitating improvements in cost-effectiveness; (c) relief to the government from the burden of direct management responsibilities of large equipment fleets and work forces; (d) the need to commit funds for maintenance contracts, with less likelihood of diversion of resources to other activities; (e) political support for adequate and more stable levels of funding forward maintenance, provided the contractors can organise themselves into a responsible lobby, and (f) a better prospect of developing a lasting institutional capacity, in the form of a pool of local contractors skilled in providing efficient and effective maintenance services (development of the potential to expand and undertake more extensive construction activities may be an important by-product).

Despite being effective and efficient, contracting routine and periodic maintenance was also found with some disadvantages. These disadvantages, according to the GTZ’s study, emanates from varying local
circumstances where the method is applied. Some of these disadvantages are: (i) contracting may not decrease costs where redundant government establishment and work force cannot be reduced or relocated to the private sector; (ii) contracting could increase costs because the very process of contracting and contract administration may require additional government resources, e.g., in measuring and certifying work quantities for payment; (iii) contracting may increase costs to the government where there is lack of effective competition in the procurement process, including abuses such as corruption in contractor selection or price fixing; (iv) government may not have the capabilities necessary to properly manage contracts; (v) domestic contractors may not have sufficient capabilities-management abilities, technical skills, equipment, working capital, and other resources- necessary to ensure effective execution of maintenance activities; (vi) contractors may not be well placed to respond quickly during times of emergency, nor to address small-scale maintenance needs in remote areas; (vii) those with capacity- big contractors- may not be interested in small routine and periodic maintenance work especially in remote areas.

However, the GTZ's Report stresses that there are two points which may need critical examination in applying contracting maintenance in the developing world. One of them is that "how can a level playing field be assured in societies characterised by cultural pluralism, 'primordial loyalties' based on
family and ethnic groups, traditional raiding of the public purse for private purposes, weak administrative controls, and soft sanctions for corrupt behaviour" (Havelka, 1990: 14). The second one is, "to have a cceptably functioning systems of contracting out requires substantial capacity in bid preparation, specification of contracted services, e.t.c. This hurdle can be overstated: after all, standard procedures are written down in many advanced countries, and can be imported. But it is a problem, especially in the least developed countries with their typically weak administrative systems" (Havelka, 1990: 14)

5.1.4 Toll Roads

Recently, many developing countries have adapted privatisation because of the worsening positions of their external debts (Havelka, 1990). This has been the case especially in the middle-income economies-like Mexico, Brazil, Malaysia and Turkey-where various road projects have been taken over by the private sector.

One of the most applied modes of privatisation in road development is BOT (Build-Operate-Transfer). Under BOT, a concession agreement is signed between the government and a private company allowing it to build, operate and collect toll from the highway users for a specific period of time and thereafter transfer the highway to the government at no cost.
Despite the recent rush for BOT, very few developing countries have largely managed to benefit from it. According to the study which was conducted in 1990 by the German donor agency, Deutsche Gesellschaft für Technische Zulchnische Zulammenarbeit (GTZ), BOT was found to be more feasible in countries-like Turkey and Mexico- which had enormous economic potential and very high traffic figures, while countries with low traffic figures and not so strong economic background were experiencing difficulties with the development and operation of toll roads (Havelka, 1990). In addition, it was found that BOT was more feasible near and within big urban centres and some bridges.

Giving Malaysia as an example, the GTZ's study notes that the construction of the North-South highway was not without problems. Although UEM (United Engineers Malaysia) won the contract to build the highway, it is noted that the bidding process had many defects due to political interference. Furthermore, UEM was not a creditworthy company and is why, it is noted, was suspended from the Kuala Lumpur Stock Exchange (KLSE) (Havelka, 1990).

Another interesting issue about the construction of the North-South toll highway is that because of UEM's financial problems, the Malaysian government was forced to break BOT rules by accepting to provide 'a security package' to the company. The package included a pre-completion loan of
RM750 million, post-completion loan of RM950 million, traffic volume guarantee, an external risk undertaking to cover costs arising from adverse foreign exchange movements; and guarantees to cover adverse interest rate movements; adverse changes in taxation, delays in completion due to factors outside its control and cost overruns due changes in government policies.

Fixing reasonable and affordable toll rates is also proving to be a difficult exercise during the implementation of BOT in Malaysia. For example, the government has of recent decided to review toll rates for Seremban-Port Dickson highway and Butterworth-Kulim expressway after protests by motorists. The rates had been increased by 50 Sen to RM1.50 for all classes of vehicles using the Seremban-Port Dickson highway (The Star August 10, 2000).

Thus, as the GTZ's study noted, privatisation "... is not a patent medicine medicine, nor is it a magic spell that makes all problems vanish in a puff of smoke. Privatisation must be seen as a catchword standing for a whole package of denationalisation measures, the success of which depends mainly on the economic-policy framework"(Havelka, 1990: 1).
5.1.5 Urban public transport

Public transport in the Third World cities consists of a wide assortment of modes, ranging from traditional man-powered trishaws and horse-drawn carts to the conventional taxi, bus, tram and rail systems of the industrialised countries (Simon, 1996).

In many developing countries, the demand for public transport has increased tremendously. This has been due to growth in city areas, population and small increases in wealth (Heraty, 1987). In some cities like Bangkok (Thailand), Bombay (India), Cairo (Egypt), Jakarta (Indonesia), Manila (Philippines) and Mexico City (Mexico), serious congestion has become the norm and has forced the authorities to promote public transport as a remedy (Simon, 1996).

Much as the idea of promoting public transport to solve traffic congestion may be plausible, the sector itself is likely to face more challenging problems in the future. This is because of the anticipated future increases in cities, population capacities and incomes. For example, the UN estimates that by the year 2025 there will be 500 cities in the Third World compared to 53 cities in 1960 (Heraty, 1987).
Traditionally, government has been the main provider of public transport in the developing countries. This was done by setting up various transport companies which were operated on a subsidised price. However, due to mismanagement and low profitability, in the face of increasing indebtedness, many of these companies have been privatised. The privatisation exercise in many developing countries has been part and parcel of the World Bank/IMF’s Structural Adjustment Programme which aimed at reducing government’s direct involvement in the economy (Simon, 1996).

As public transport continues to be less in supply and unprofitable in the Third World, the travel needs of the urban poor will continue to be thwarted. Various studies, including one which was conducted in New Dehli (India) have revealed that the urban poor have a higher patronage to public transport than those in the middle-income group. Even in situations where there is a slight increase in income, public transport become more affordable for the poor (Heraty, 1987). This definitely leaves a big challenge for the policy makers to overcome especially at a time when all their energies are devoted to relaxing government’s involvement in the economy.
5.1.6 Urban bus services

In most of the Third World's cities, buses play an important role in transporting people from one point to another. Although government has been the main provider of bus services, privately owned bus companies have of recent gained significance. Various studies on transport have also shown that privately operated bus services (both in urban and rural areas) provide generally more efficient and sometimes cheaper services. In contrast, state managed bus services are costly, affected by corruption, lack of spare parts, poor maintenance, overstaffing, low morale and low profitability (Heraty, 1987).

Much as there have been sweeping changes in the ownership and management of public transport in the Third World in favour of the private sector, urban bus services are still faced with many problems. Some of these problems are: increasing privately owned cars, traffic congestion, low profitability, competition from paratransit modes, old buses, road accidents and parking problem (Simon, 1996).

On the issue of low profitability, it is noted that in 1983 about two-thirds of all bus operators in developing countries made losses (Heraty, 1987). This means that government assistance in form of subsidies to bus operators would appear appropriate but with the introduction of the World Bank/IMF's
Structural Adjustment Programme (SAP) in many developing countries, it may be like a nice dream which is impossible to actualise.

To combat traffic congestion, priority measures for public transport, such as bus-only lanes and segregated rights-of-way have been instituted in some cities like Bangkok (Thailand). These measures have so far proved efficient and effective. In Brazil, Chile and Costa Rica, road safety measures including analysis of accident data, safe road design, inspection of motor vehicles, driver training and testing and road user education have been pursued (Heraty, 1987).

5.2 Present challenges facing road development in Malaysia and Uganda

Both Malaysia and Uganda are facing various challenges or problems in their road development efforts. Although these problems differs in magnitude in both cases, they pose a strong challenge to the entire economic development of the two countries. Some of the problems are as follows:

a) Inadequate road network.

In Malaysia, deficiencies in the road network became acute in the early 1990s and have persisted. In 1986, Malaysia started producing her own cars called Proton. These cars have over 70% of the local car market and government has guaranteed that by imposing high tariffs on the imported cars (Jomo,
In addition, the country’s rapid economic development has made it easy for many Malaysians to own cars. This in turn has led to traffic congestion in the busy urban centres especially in Peninsular Malaysia. In 1995, the estimated 1.4 million vehicles which were plying Kuala Lumpur city roads on a working day exceeded the city population of 1.3 million (Seventh Malaysia Plan 1996-2000). The Far Eastern Economic Review (1993) reveals that deficiencies in the roads, ports and public utilities were cited as one of the reasons why the approved foreign direct investment (FDI) during the six months of 1992 declined by 33% to RM9billion from RM11.6billion during the same period in 1991. Although government has been very responsive to the problem, especially by signing various concession agreements with private companies to construct toll expressways, this will have to be supplemented by approaches like; improvement in traffic management, inter-modal approach and strengthening public transport. At present, Uganda’s road network appears to be enough although it was badly affected by the country’s political turmoil which almost reduced some road sections to mere tracks. Even with the rehabilitation programme which started in 1986, little has been done especially on the feeder roads. Many sections of the feeder road network are still impassable and some which have been rehabilitated are beginning to become impassable due to lack of regular maintenance.
However, due to improved economic conditions, traffic congestion has been observed in Kampala city where the rate of motorisation is beginning to increase. This definitely calls for a quick response from the government.

b) Manpower shortage

In Malaysia, the worsening situation of labour shortage is one example of the most serious-side effects of the huge foreign and domestic investments. Labour shortage is a general problem to the country’s economy and according to the Far Eastern Economic Review (1992), the Federation of Malaysian Manufacturers complained that their sector was lacking 80,000 workers. Yet a publication by the Tokyo’s Institute of Developing Economies (1997) reveals that, Malaysia has an estimated shortage of 9,000 engineers and 18,000 engineering assistants. Although government recently loosened its labour regulations by allowing in workers from the neighbouring countries, this may not be a complete panacea for the problem. In fact, it may just exacerbate the country’s current account deficit especially as foreign workers begin to repatriate their earnings. Government will need to emphasise technical education and if possible emulate Singapore in this area. However, Uganda’s manpower problem began in 1972 when Amin expelled Asians. The situation was made worse by the subsequent civil war which forced many skilled engineers out of the country. According to the 1983 World Bank’s Transport Sector Memorandum, the Ministry of Works had an overall vacancy rate of 50% in 1982 when a survey was carried out. Out of the 39 engineering posts,
only 15 were filled. Since 1983, there have been minor changes and most of
the Public Works Departments which are scattered around the country lack
skilled engineers and it is no wonder that many road sections of the country’s
feeder road network still remain un-maintained.

c) Traffic congestion

This implies a mismatch between road capacity and the number of vehicles,
especially those that are privately owned. As we have observed earlier, in
Malaysia, traffic congestion has largely been due to increase in the number of
privately owned cars. Between 1991 and 1995, Malaysia experienced a 15%
decrease in kilometres of road per 10,000 vehicles. This was caused by a
higher increase in the number of registered vehicles, which grew by 41%
compared to 19% increase for roads in the same period (Seventh Malaysia
Plan 1996-2000). In Uganda, however, traffic congestion has been observed
in Kampala city. This has been due to the increased rate of motorisation.
Unlike in Malaysia where planners have been responsive to the problem, in
Uganda, government efforts towards solving this problem have been a bit
sluggish.
d) Institutional reform

In the case of Malaysia, especially Peninsular Malaysia, institutional reform is not a serious problem. But in East Malaysia where the level of road development is still below that of Peninsular Malaysia, institutional reform is needed. This will continue to be so especially as government continues its struggle to match the region's network with that of Peninsular Malaysia. Even in Peninsular Malaysia, institutional reform will be necessary as the country approaches the year 2020 when it is hoped to be fully developed. This is because the magnitude of future problems will be different and will surely call for different technological skills and expertise. Government will have to go further than installing traffic lights and imposing strict traffic regulations. In addition, traffic information will have to be made available, accessible to the road users and its management integrated even among the various concessionaires. However, in Uganda, institutional reform is still a big problem. Many road administration departments have almost maintained the same shape of the colonial period. Recently government set up a Road Agency Formation Unit (RAFU) which is supposed to oversee the implementation of the Ten-Year Road Development Programme (1996-2006). But many Public Works Departments (PWD) lack skilled engineers and operation equipment. Hence, serious reform programmes in the PWDs are needed if the objectives of the ten-year programme are to be achieved.
e) Environmental impacts.

These includes pollution, noise, vision intrusion, clearance of vegetation, displacement of people and topographic changes. According to the Ministry of Science, Technology and Environment's Report (June 2000), Malaysia has been experiencing climatic changes due to the effect of the greenhouse gases. In 1996 alone, 144 million tonnes of carbon dioxide were emitted in the entire country. The country's daily average temperature also increased from 26.2 degrees centigrade in 1951 to 27.2 degrees centigrade in 1996. The Report further estimates that by the year 2020 Malaysia will experience a temperature change of between 0.3 and 1.4 degrees centigrade (The Star, July 6, 2000). All this has partly been due to the increased rate of motorisation especially in Peninsular Malaysia. In addition, the construction of highways has led to the clearance of vegetation and changes in topography. Of recent, government has been encouraging contractors to plant trees along the new highways. It has also been sensitising the contractors about the need to recognise the impact of their activities on the topography. In the case of Uganda, pollution and noise levels are still low but are gradually increasing especially in Kampala city where there has been increased rate of motorisation. In addition, government has not been so active in encouraging contractors to replant trees where they have been uprooted in the process of constructing roads.
f) Finance

Road construction and maintenance requires huge resources. Malaysia and Uganda are both facing the problem of inadequate financial resources especially at the local levels. Most of the local authorities in both countries lack enough finance to carry out their road development programmes. In the case of Uganda, the situation is worse. This is due to the country's poor economic performance.

g) Accidents.

The main reasons for the occurrence of accidents are always given as; poor road quality, high speed, poor driving, poor parking and mistakes which are made by pedestrians. The rate of accidents in Malaysia is very high and this is due to the increase in motorisation. The total number of motor accidents in the entire country increased from 76,882 in 1987 to 87,999 and 118,554 in 1989 and 1992 respectively (Ministry of Transport Annual Reports, 1988-1993). In Uganda, the rate of accidents is still low compared to Malaysia. However, it is beginning to increase especially in Kampala city. According to the Ten-Year Road Sector Development Programme's Report (1995), the total number of motor accidents in the country increased from 4,359 in 1987 to 5,525 and 5,906 in 1989 and 1992 respectively.
5.3 The future strategies towards road development in both Malaysia and Uganda

5.3.1 Future Strategies towards road development in Malaysia

Though one of the more affluent members, with a per capita GNP which places her securely in the Upper-middle-income group of the World Bank’s classification, Malaysia is still today in the Developing World and it is hoped that by the year 2020 it will be a fully developed nation.

According to the “Vision 2020”, an adequate, efficient and reliable infrastructural facilities are a prerequisite for ensuring an accelerated pace to sustainable economic growth. Hence, the future strategies for Malaysia’s road development are:

i) The need to develop an adequate, reliable, efficient, safe and balanced road network.

It is indisputable that Malaysia’s road network has been one of the central factors for her recent economic success and indeed the huge inflow of foreign direct investments. Unfortunately, the network has become inadequate due to rapid economic expansion especially in Peninsular Malaysia. Deficiencies in Malaysia’s road network were first observed in the late 1980s. In 1992, the country lost about RM3 billion in terms of approved FDI. This was due to the weaknesses in roads, ports and other public utilities (Far Eastern Economic Review, 1993). Already some electronics factories located in Penang have
closed down and are yet to be relocated in China (The Star January 26, 2000). And now the rush by China to join the World Trade Organisation (WTO) will definitely have an impact on the inflow of FDI to Malaysia. Until 1992 alone, China’s FDI contracts jumped to US$58 billion, exceeding the sum of all previous FDI. Foreign Direct Investment commitments now fluctuate near the US$100 billion range (UNCTD 1996). These are good reminders to the Malaysian government and its planners to correct the defects in the country’s road network which has been a boon for her recent economic development.

In addition, government will have to match the road network in East Malaysia with that of Peninsular Malaysia. For example, by 1995 Sabah had about 10,840 km of roads and only 34% were paved. Yet Sarawak had about 5,118 km of roads and 58.4% were paved. But in Peninsular Malaysia almost all states have over 75% of their roads paved (Seventh Malaysia Plan, 1996-2000).

ii) Traffic congestion.

Traffic congestion has been on the increase since 1986 when Malaysia began manufacturing cars. In addition, rapid economic expansion has made it easy for many Malaysians to own cars. Of recent, government has embarked on building new toll expressways to solve the problem. However, according to the publication by the Tokyo’s Institute of Developing Economies (1997), it is
estimated that by the year 2020 all cities in Asia will house 2.3 billion people or 2.4 times the current level. Yet, the World Bank estimates that East Asia will enjoy a sustainable GDP growth rate of more than 9 per cent in the first decade of this century. At this rate the per capita income for East Asia will double in less than ten years, allowing East Asia to surpass the economic blocs of both North American Free Trade Agreement (NAFT) and the European Union (EU)(Gill, 1998).

Surely, Malaysia will have its own share from the above economic trends in the region and her economy will experience more challenges. For example, Abdullah and Nooi(2000) notes that Malaysia's urban population is expected to rise from 54%(1995) to 73% by the year 2025. This means that traffic congestion in most of the major urban centres will definitely shoot up and its remedial actions shall not only involve installing more traffic lights, building more toll expressways and strengthening public transport but also emphasise traffic information availability and accessibility to the road users and integrating traffic information management even among various concession companies. In fact, road distance may not be the cause of traffic congestion especially in peninsular Malaysia but the usage of the available road length in the region.
iii) Regional cooperation.

As globalisation and regional integration continues to take root, massive movements of economic resources are expected to take place. This will also be true within countries. But for any country to benefit from such arrangements, it will need to have an adequate infrastructure. Malaysia for example is a member of the ASEAN (Association of South East Asian Nations), APEC (Asia Pacific Economic Cooperation) and other sub-regional organisations like the Malaysia-Indonesia-Thailand Growth Triangle and Singapore-Malaysia-Indonesia Growth Triangle. The main aim of these regional and sub-regional organisations is to strengthen social and economic cooperation among the member countries. But Malaysia will only stand to benefit if it puts in place an adequate infrastructure. Trade and tourism will only succeed when Malaysia improves on her road network, ports, airports and railways through regional coordination. It has done it with Singapore where a second highway link was built and will need to do it with Thailand, Indonesia and Brunei.

iv) Institutional reform.

In this case, Malaysia should take a good lesson from the 1997 Asian financial crisis. Many authors have written stating that the East Asian countries rushed to embrace financial liberalisation without reforming their institutions to cope up with the new challenges. And because of that, the financial crisis occurred.
Hence, as Malaysia continues to develop, there will be a continued need to reform her institutions like the Malaysian Highway Authority and Public Works Departments. In addition, serious reforms will have to be carried out in East Malaysia where the level of road development cannot match that of Peninsular Malaysia.

v) Increasing complexity and financing of road projects.

In the future, infrastructure planning will require coordination and integration based on principles of inter-modalism, time and cost effectiveness. As bigger and complicated projects continue to surface, the need for more finance and managerial competence will also increase. On finance, it is estimated that the physical infrastructure requirements for the ASEAN region by the year 2004 is US$12 billion and that of Asia by the year 2007 is US$1.5 trillion. But both the official flows and the region's financial capacity are below the need, meaning that privatisation may be the remedy (Tokyo's Institute of Developing Economies 1997).

Besides listing project companies on the Kuala Lumpur Stock Exchange (KLSE) to tap capital for financing road projects, Malaysia will have to amend some of its privatisation guidelines which limits foreign companies from participation. Clauses, such as those that give special treatment to the Bumiputras (native Malaysians) during privatising projects should be eliminated. In addition, the country's bond market will have to be
developed further to provide the needed capital for infrastructure development. One way to do it is by developing the insurance industry - which is a good mobiliser of long-term savings - to facilitate the development of the long-term bond market and building the infrastructure projects with long gestation periods (The Star August 29, 2000).

However, in order for Malaysia to fully benefit from the external private capital, it will have to succumb to proper project planning, management, legal expertise and exposure to new technologies. Without that, the country may be trapped again in another financial crisis.

vi) Privatisation.

There is no doubt that Malaysia’s privatisation policy has largely been successful. The Seventh Malaysia Plan (1996-2000) reveals that government’s total savings in capital expenditures from privatised projects during the Fifth Malaysia Plan amounted to RM51.6 billion or 70.9% of the total savings (RM72.8 billion), from privatisation since 1983. However, one of the big hurdles facing government today is how to sustain the private sector in road development. This has partly come as a result of the 1997 Asian financial crisis. Initially, government used to provide support in form of soft loans and other guarantees to the private sector. But this has been reduced due to financial difficulties facing the country.
According to the Malaysian Highway Authority’s Annual Report (1998), various road projects failed to take off because of the failure by project companies to secure commercial loans. This even becomes a bigger hurdle if the awarding of contracts is not impartial and transparent: for it tends to defeat the rationale for privatisation. Hence, to sustain privatisation towards road development, government will have to succumb to market forces and concentrate on planning, monitoring and strengthening its regulations.

vii) Environmental management and protection.
Since the First UNs Conference on Human Environment in 1972, issues related to environmental management have become important components of development. As Malaysia continues to strive to become developed by the year 2020, it will surely assume more responsibilities. For example, it is mentioned in the Far Eastern Economic Review (1990) that, “NIC status bring with it the implication that one is in the big ‘boys club’ with all the responsibilities on the environment, human rights and tariffs that this entails”. Hence, in order for Malaysia to become a true Asian economic tiger and not a paper tiger by the year 2020, environmental management and protection should be among its development priorities.

viii) Intermodal approach.
The main aim for each mode of transport is to provide an efficient, reliable, safe and adequate transport services. If a particular mode is faced with
various deficiencies, then it is better to complement its services with those of other modes so as to have an efficient and effective transport services. It would be wrong for any government to rigidly continue pursuing a particular mode of transport when its operation is costly and inefficient. Road transport is always preferred but some times it may fail. Hence, Malaysia will need to apply an inter-modal approach by supplementing road transport services especially in the busy urban centres with railway services. Government will need to expand the Light Rail Transit (LRT) services nearer to people so as to reduce the high costs related to road transport like traffic congestion and pollution.

ix) Exporting services to other countries.

Malaysia has accumulated a lot of expertise in the area of road construction and development. The country has never faced any serious road problem and has maintained its superior position with a good road network in the South East Asia. However, Malaysia will need to share its good experience with other countries that have failed. In addition, the country’s construction industry will have to export its services to other countries in the way of improving the country’s balance of payments position (particularly the current account).
ix) Regional balance.

As noted before, there is a great imbalance towards road development in Malaysia. The country's road network in Peninsular Malaysia has always been superior. Yet, East Malaysia (Sabah and Sarawak) has always lagged behind in road development. In addition, there is a tendency to reduce Malaysia into Peninsular Malaysia. This very theory will also generalise road development in Malaysia. In fact, very few writers have attempted to expose this weakness and as such rapid economic development in Peninsular Malaysia has been inferred to the entire country.

Hence, to solve regional imbalance, government will have to spend more of its efforts in constructing and upgrading roads in East Malaysia. In addition, there is a need to strengthen coordination in economic planning between Peninsular Malaysia and East Malaysia. This appears to be lacking and if pursued, it may go along way in bridging the existing development gap between the two regions.

5.3.2 Future strategies towards road development in Uganda

i) Institutional reform

Uganda badly need to reform her road administration structure so as to cope up with the new challenges. Since the country's colonial period, her institutions have almost maintained the same shape. However, in 1999,
government instituted a Road Agency Formation Unit (RAFU) which shall be transformed into a permanent road authority by the year 2002. But government will have to reform all its Public Works Departments scattered around the country.

ii) Establishing an adequate, reliable, efficient and safe road network.

It should be noted that Uganda's road network appears to be complete. But due to its poor maintenance which is associated with institutional collapse, the network becomes inadequate. Most of the feeder roads have deficiencies in form of potholes and poor drainage system. In addition, traffic congestion has been observed in Kampala city. To solve this problem, government will have to improve both roads that are connecting to the city and those that are in the city, improve traffic management and work out a mechanism to divert heavy trucks on transit from proceeding to the city centre (city bypasses).

Furthermore, government will have to improve accessibility to the rural areas by rehabilitating feeder roads and the distance of paved roads should be increased to attract foreign investors and widen the local markets.

iii) Road maintenance.

Uganda is faced with a big problem of maintaining her road network. This problem emanated from the bad political history of the country when the civil administration was greatly disrupted. However, to solve this problem, a
combination of remedial actions will have to taken, like reforming all the PWDs which are scattered around the country and balancing up rehabilitation programmes with maintenance programmes. Government should also continue seeking technical assistance from external donor governments.

iv) Inadequate road financing

Road construction and development calls for huge financial resources. In a poor country like Uganda, it becomes extremely difficult to build and maintain roads. At the local level, many districts lack both financial and technical capacity to carry out their road development programmes. Most of the recent rehabilitation programmes of the country have been supported by external donor governments. But in the present situation where external aid is generally declining, Uganda will surely have to devise other ways of financing her road programmes. One of the ways is by diversifying her exports and creating a conducive environment for foreign investors.

v) Privatisation of road programmes

One of the main objectives of the Ten-Year Road Development Programme (1996-2006) is to encourage private sector participation in the road development programmes. In addition, it is hoped that by the year 2001, 80% of the routine and periodic road maintenance will be done by the private sector. But with the current institutional problems especially at the local levels and inexperienced local construction industry, this may not be possible.
In addition to reforming the administrative structure of roads, government will have to nurture and develop the local construction industry so as to be able to assume that huge responsibility. Otherwise, if that is not done then road privatisation will only benefit foreign companies.

vi) Regional cooperation

With the recent revival of the East African Community (EAC), Uganda should exploit that opportunity to cooperate and coordinate with her neighbours in the areas of infrastructure and transport development. Since Uganda is a transit country, coordination with her neighbours in policy formulation and implementation becomes important. For example, countries like Rwanda, Burundi, Zaire, Sudan and Kenya use the International Northern Corridor Route (INCR) which passes through Uganda. These countries should work in concert with Uganda to implement the International North Corridor Route Agreement which was ratified recently (Heraty, 1987). Otherwise, Uganda will continue wasting a lot of her scarce resources on improving and maintaining the INCR. A common measure on axle loading weight for trucks should be instituted. This could be similar to that of the European Union (EU's maximum axle loading weight is 8.2 tonnes for trucks).
Photographs showing Malaysia's unique drainage system construction.
Malaysia's superior drainage system construction.

Strengthening public transport could be a good solution for traffic congestion in urban areas.

An intermodal approach may be a good vehicle in solving the transport problem.

Plate 2
Source: Author
Photographs of Kerinchi Link expressway which is under construction.
Highway Flooding is a Common Phenomenon in Klang Valley

Plate 4
Source: The Malay Mail  May 1, 2000
An Artist's Impression of the Completed Kerinchi Link
(Still under construction)

Plate 5
Source: The Star February 15, 2000
North – South Highway in Peninsular Malaysia

Plate 6
Source: Toll roads in Malaysia 1997
Construction of better drainage system is still difficult in Uganda.

Plate 7
Source: The New Vision July 7, 1999
Entebbe road is one of the new modern roads in Uganda.

Pot-holes are still a common feature on many roads in Kampala city (Uganda).

Plate 8
Source: The New Vision July 7, 1999