



TRANSPORT POLICY: Cars First

The prevailing **CARS FIRST** implied policy is the only policy aspect to be addressed here. This is because it is all pervading. Also because the privileges assumed by cars (including passenger vans) bear down on all aspects of transport policy, whether declared or not, and have a strong impact on the national economy, in which transport has a 10% to 20% component of GDP.

Most countries, including Lanka, have published transport policies containing vague platitudes, such as "ensuring provision of passenger and goods transport needs in harmony with environmental concern at least cost" and "provision of satisfactory public transport at affordable fares", and sometimes lip service to priority for public transport. In practice, however, because of the over-reaching influence of the road lobby none of these "policies" generate implementation.

The privileges of cars include cheap fuel; unrestricted import of motor fuels; tolerance of harmful emissions; a relaxed concern about road accidents (2,000 fatalities per year); and profligate use of urban public space. Each of these privileges will be discussed.

2. Cheap Fuel

Table 1 shows retail prices of petrol (gasoline) in Europe, Lanka and USA. Britain extracts from the North Sea of its own crude oil and has home based efficient refiners of its own need-based balanced fractions, and therefore cheaper cost of motor fuels than Lanka. Nevertheless, Britain had eased up retail petrol prices to the equivalent of Rs. 127 per liter in 1998. (It has moved further up since then.) The high price is a result of a recently adopted environment-oriented policy that also discourages car use. This policy is implemented by a tax on the market value of its own crude aimed at an annual increase in the retail price of motor fuels by inflation plus 3%. The 3% enhances inhibition of private motorized travel (cars + passenger vans + motor cycles etc.) and thereby encourages modal transfer to public transport on urban streets, rural roads and motorways and on to rail.

Other European countries with similar objectives had prevailing retail prices of petrol ranging from Rs 67 to Rs 108. Yet Lanka, a poor developing country, deems itself prosperous enough to allow a liter of petrol to retail at Rs 54, somewhat above the wealthy profligate US pump price of Rs 31. The result of Lanka's cheap petrol (and diesel too) is a stimulant to ownership and usage of private motorized vehicles leading to increasing traffic congestion; increasing demand for more or "improved" roads

and parking space; deteriorating air quality in towns and cities; and to generally unlivable cities.

The impact on the economy includes huge diversion of foreign exchange from the huge cost of building expressways. Incidentally, road improvement for some, mostly cars, can cause dis-improvement for others, especially pedestrians and cyclists.

Impacts on the economy of profligate spending on automobile fuels

Following from the previous section is the substantial import of crude oil and diesel motor fuel. This comprises a large proportion of our yearly foreign exchange outgo. This in turn endangers the balance of payments and the budget deficit. The outgoing money could have been retained as

J. Diandas *

Rupees and deployed to support the railway and buses and to invest in many useful projects or programs.

Likewise buy-at-will imports (of passenger vehicles, tires; carbon black and chemicals for local tire production and re-treading; spare parts and accessories;) divert financial resources from more economical or socially important deployment.

Private vehicles using petroleum fuels burn up energy per passenger kilometer at approx 5-10 times as much as buses.

In contrast, Singapore restrains private vehicle travel positively. It prices up the cost of such vehicles firstly by restricting annually the number of vehicles to be imported; secondly by auctioning permits to buy them on condition that for each permit an old vehicle is scrapped. This results in a permit fee approximately equal to the cost of a new vehicle. Thirdly it imposes import duty and sales tax aggregating to 100% of landed cost. Thus the total cost to the buyer is 3 times the actual landed vehicle cost. Finally, for entering congested areas at congested times it charges electronic road pricing (ERP). This is done by requiring all vehicles to be fitted with electronic stored value tags from which variable charges are deducted when passing under gantries installed across the road. Vehicles without tags or with value-exhausted tags are automatically photographed and fines imposed by post.

Harmful Emissions

All motorized vehicles emit exhaust gases. Invisible gases are harmful to local air quality. Car-

bon dioxide (CO₂), a function of burning fossil fuels, contributes to worldwide global warming. Although Lanka's contribution is minimal, CO₂ averted is tradable under the Kyoto Compact. CO₂ emissions and smoke can be reduced but not eliminated by efficient engine tuning.

Here, too, private vehicle travel emits 5-10 or even more times as much in invisible (e.g. CO) and visible pollutants as buses.

The economic impact of these emissions lies in the considerable cost of health care and medicine for asthma and of general debilities of urban residents.

Accidents

The safest forms of transport in Lanka, as in most of the world are air, railways and buses. This was recently enunciated by Dr Amal Kumara whose students at Moratuwa University had exhaustively analyzed the relevant statistics. (Diandas arrived at a similar conclusion in a 1983 publication).

If accident incidence is measured by fatalities per vehicle, buses will appear to be the worst offenders because this measure does not count the work that any vehicle performs. If the measure is per vehicle-kilometers (a bus may travel 40,000 km per month as against 3,000 by car, a measure of driver competence and behavior), bus drivers turn out to be relatively good.

However, when measured (as it should be) by passenger-km, which is the purpose of all vehicle use, buses turn out to be the safest means of road transport. Railways are even safer by the same measure, despite the railway bashing by the print-media.

Nobody will excuse dangerous driving by bus drivers. Likewise none will condone inadequate maintenance of railway track and rolling stock and inattention to line-side signals. Yet, the reality of travel safety risk is established by analysis of reliable statistics, not by media enthusiasm for a good story and dramatic photograph.

The economic cost of serious accidents is loss of life plus cost of vehicle repair or replacement.

Urban Space

There is no dispute about the fact that there are more vehicles on the move than can be accommodated on the roads, especially in cities and towns. This is sometimes expressed

inversely as inadequate roads for vehicles wishing to use them. It also illustrates the ancient economic law that when demand in any market (for goods or services) exceeds supply the price for them will rise, inducing either increase of supply or reduction in demand. Congestion is the symptom of this condition. Oppositely, when supply exceeds demand the price will reduce, inducing increase in demand or reduction in supply. The market will settle when demand and supply match each other.

Unfortunately, road-space does not have a market. It does not lend itself to auctioning. You cannot buy road space as you go along. Nor can it be produced or withdrawn in a jiffy. Only demand for it can adjust itself in the short term. With such market failure, governments must intervene to simulate market conditions. This can involve the following to be discussed in Section 7, 8 & 9.

7. Railway rehab, extension and electrification,
8. restraint of private motoring,
9. drastic improvement of bus transport.

The economic value of such interventions will be avoidance of the construction cost of fanciful expressways, highway flyovers etc., and utilization of funds so saved for maintenance of existing roads (Section 10) and support for railway and buses.

Railway: Rehabilitation, Double track, Extension, Electrification

Extensive research in London has shown that new Suburban Railways alone with frequent trains have substantially relieved road congestion.

Railway development needs short-term investment for long-term benefits. Therefore in appraisal, future benefits should not be discounted. A typical 10% discount rate values annual benefits after 20 years at only 10% of actual benefits and after 30 years at only 4%, whereas we expect developments, except diesel rolling stock, to last more than 50 years.

Rehabilitation of Sri Lanka Railway (SLR) tracks and signaling and modest improvements are essential for making present services more reliable, comfortable and safe.

Double tracking to Matara, Kurunegala and Kandy is needed to drastically improve reliability and reduce journey time. Key extensions are necessary to expand catchments. Matara to Dickwella to Beliatta will promote local passenger train service in Ruhuna and relieve traffic congestion in Matara town center. A short branch from near the existing Kurunegala Station into the city center (across the road from the bus station) will improve the present abysmal 5% rail market share to 50% or more and provide substantial relief to Kandy Road congestion. Kelaniya to Biyagama will attract IPZ commuter traffic and container movements, also relieving the Kandy Roads. A direct curve

from the Colombo line to the Matara Line will relieve congestion in central Galle. The present airport station to under the air passenger terminal (emulating the worldwide trend) and into the Katunayake Industrial Zone will take off the Negombo Road some air passengers, their meters and greeters, containers, commuter and airport employees. This project must include a curve to re-connect the Kandy and Negombo lines to the Port in order to ease container diversion to rail.

Railway Electrification (to Kochchikade, Kurunegala, Kottawa and Kalutara) coupled with frequent regular-interval rail services will improve travel quality and hugely divert passengers from road (both private vehicles and buses) to rail. It will also substantially reduce operating cost (mainly maintenance) and capital cost, enhance longevity of motive power and improve train utilization.

Gain to the economy will lie in substantial saving of foreign exchange for imported rolling stock (due to longevity), and other materials and reduced need for and cost of constructing new roads and road improvements.

Restraint of private motorism

Restraint of cars and passenger vans will obviously reduce congestion in towns and even village bazaar areas. Restraint can be obtained by physical and fiscal means.

Physical constraint involves narrowing key roads, establishing pedestrian malls (with buses or trams allowed in) and prohibition of parking. This needed on sidewalks, on arterial roads and on bus routes. It also calls for limiting on-street or off-street parking by compulsory restriction of surface, underground or multi-level car parks in relation to nearby office space (i.e. maximum provision as against the present UDA prescription of minimum provision), with some exemption for resident off-street parking. The goal of these processes is called TRAFFIC CALMING the effect of which is slowing traffic, the opposite of traditional efforts to reduce motorized journey time. TRAFFIC CALMING is practised in many worldwide cities, to create "livable" areas and promote leisurely retail shopping streets.

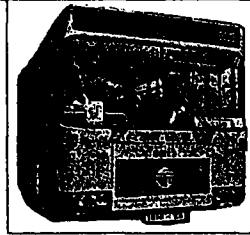
Fiscal restraint includes increasing fuel prices as described in Section 2, and increasing by taxation the cost of non-resident on-street and off-street parking in relation to the value of adjacent land and square footage of commercial space.

Economic benefit from car restraint will directly arise from less imports of fuel, vehicles and spare parts etc. and many indirect benefits.

Drastic improvement in bus services

It is difficult to improve bus services hindered by congestion caused by other vehicles. Hence several improvements have to be introduced simultaneously with car restraint. Which should come first is a difficult chicken and egg problem, so perhaps both must be gradual. Service improvement is also impeded by wasteful practices of

private buses, including over-flow buses cluttering the streets near terminals and lingering at busy intermediate bus stops.



Bus services need quality (perhaps low-floor) buses, better passenger-friendly positioning of bus terminals and stops, better information systems including large, lucid, well-lit destination indicators at front and back of bus, and regular high frequency services. Also needed is strategic routing and through-running routes to give better choice of boarding and alighting points in downtown areas.

Economic value can arise from less fuel, release of excessive high value terminal space and avoiding the "waiting for a load" time and lingering practices of private buses.

Maintenance of Roads

Moratuwa University has rightly emphasized over the last two decades that provision for new roads (trunk, urban & rural) is not accompanied by parallel provision for maintenance.

It is generally accepted that concentration of funds on regular preventive maintenance of existing roads and drains, costs less than delayed rehabilitation or rebuilding, and will make for continuous instead of intermittent saving of vehicle operating cost.

Gain for the economy will follow from the above-mentioned savings and from fewer imports of maintenance materials and of vehicle, spares and tire replacements. It will also gain by postponing the perceived need for constructing new expensive "expressways".

Conclusion

The prevailing implied CARS FIRST policy must be converted to an explicit PUBLIC TRANSPORT FIRST policy. This must have an uninterrupted short, medium and long-term commitment.

** Mr. John Diandas who passed away recently had been a regular contributor to the columns of Economic Review over the years, especially in the field of transportation. Much sought after academic in his chosen field, Mr. Diandas always endeavoured to attend minute details and instill highest professional standards in his meticulously researched writings and presentations. While paying tributes to his memory we herewith posthumously publish an article exclusively written for this issue of our journal.*