NEED FOR NEW APPROACHES TO ROAD FINANCING

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Need for New Approaches

Road transport infrastructure is of great importance for economic growth, citizen mobility, consumer welfare and national competitiveness. This was well understood in post war era in US when the Interstate highway system was financed and completed. The European Union Trans European Road Network, TERN, aims at the economic development of the Community. However, few practical examples of the Commission work support the tremendous needs to improve European road transport conditions. Any proposals for reforms in road and street financing have remained only as paper documents and proposals for research needs in this field are dismal.

Highway financing competes with other public needs. Many publicly financed services, like social welfare and health care, need increasing resources while there is a simultaneous pressure to reduce direct taxes.

The only possibility for the highway sector to manage in the competition for funds is to establish clear links between road usage and highway management. The answer is road pricing. In this paper the author proposes financial instruments to be directly linked to the management of roads and services to road users.

Public Infrastructure Financing

To rely only on public financing of road transport infrastructure is becoming more and more difficult in all EU countries. This was a clear message of the White Paper on "Fair Payment for Infrastructure Use" (COM (1998)466 final; 22.07.1998) (1). EU is approaching charging and financing of the European transport infrastructure on a multimodal basis. Another principle of charging in this document is the "user pays" principle, i.e., all users of transport infrastructure should pay for the costs, including environmental and other external impacts, they impose, at, or as close as possible to the point of use. In general EU favours greater involvement of the private sector, opening for fair and equal competition in a single market and in the name of sustainability, reduction of pollution, congestion and accidents. The EU proposal goes as far as promoting “transport accounts” at Member State level. However, using subsidiarity as an excuse, the paper fails to propose any links from the “transport accounts” to highway management.

In its editorial the Economist magazine in its December 6, 1997 issue (2) brought the road pricing to a world wide discussion forum. h her editorial the paper rightly proposes the charging of vehicle use, not for the ownership as many governments do. The paper discusses traffic reductions using either road pricing or physical obstructions. I urge the administrations to use positive instruments to promote public and non-motorised transport and less polluting vehicles. The paper argues that all ways and means to improve road and transport management in order to improve the mobility of our citizens have not yet been used. We should carefully study the new possibilities of transport telematics and teleworking when we need to save money for the maintenance of existing roads in stead of building new ones. Finally the paper states that *If road pricing is to be made politically acceptable, both the methods of charging and the use of revenues must be easily understood and made totally transparent.*

The World Bank (3) sees the problem in broader context. Their approach to improved road management lies in promotion of commercialisation, bringing of roads into the marketplace, putting them on a fee-for-service basis and managing them like a business. These four building blocks focus on; clarifying responsibility of the network, creating ownership of road users in road management, securing an adequate and stable flow of financing and strengthening management and improving managerial accountability.

The Bank sees an active participation of road users as a tool to win public support for secure and stable road funding. Road user participation in the management boards of road agencies will bring in democratic elements in road management and add transparency in the agency operations.

The Bank´s research shows that many governments cannot increase budget allocations, given present fiscal conditions, to suffice the road sector needs. Several countries are addressing this issue by separating road financing from the government's consolidated budget. They have introduced an explicit road tariff consisting primarily of vehicle license fees and a fuel levy. The revenues are collected independently of the government's sales and excise taxes and are deposited directly into a road fund. The tariff is generally set to cover the full cost of operating and maintaining main roads and part of the costs of operating and maintaining urban and rural roads.

Some recent US research reports (4 and 5) tackle the same problems of fair payment of different road transport modes and the linkage to road management. Encouraging is that the authors in their "new approach" propose a new type of contract between transportation agencies (highway administrations) and their customers (the road users). This new approach is a direct linkage between road user fees and the highway operator.

Different Approaches to Road Charging

The EU White Paper is approaching the charging and financing of the European transport infrastructure on a multimodal basis. Another principle in charging is the "user pays" principle, i.e. all users of transport infrastructure should pay for the costs, including environmental and other external impacts, they impose, at, or as close as possible to the point of use. In general the EU approach favours greater involvement of the private sector, opening for fair and equal competition in a single market and in the name of sustainability, reduction of pollution, congestion and accidents.

The charging principles proposed in this paper aim at efficient use of infrastructure networks, financing infrastructure from user contributions, and accommodation of different financial modes. A transport undertaking should have incentives to;

1. use vehicles that cause less road damage, are less polluting and are safer;
2. change routes and logistics to those with lower levels of road damage, congestion, accident risks, and environmental impacts;
3. or switch to a mode with less impacts.

This means that the typical member State attitude to levy transport sector taxes only for fiscal purposes should be changed to finance for network and external costs in very broad meaning.

EU is concerned of the limited possibilities of financing new infrastructure, particularly expensive structures like bridges and tunnels. For this reason public private partnerships, PPP, are increasingly recommended. EU even approves in such cases that revenues collected to recover all such costs may exceed marginal costs especially at the beginning of the project. Such charges are likely to reduce the socio-economic benefits of a project, especially if the private partnership is solely based on property development. However, the alternative often is not to build the project at all.

In terms of heavy goods vehicles, HGVs, EU is promoting development of standards for electronic charging technologies. Member States would then be encouraged to harmonise interoperable systems for road pricing either through existing toll or Eurovignette systems or, preferably, through the development of more cost related electronic kilometre charges. This would lead to a much greater degree of distance related charging. The Commission will also develop a proposal for the environmental classification of HGVs to facilitate development of charges that better reflect the different costs of environmental impacts due to vehicle use. For urban road pricing EU has been discussing for specific R&D programs. However, at the same time when EU is only discussing approaches, the Swiss Government has put into practice a Heavy Vehicle Fee, HVF, based on the weight of the truck and the mileage travelled in Switzerland. Urban road pricing has been a long time practice in Norway and is obviously finally accepted by the citizen.

The weakness of the EU approach lies in the subsidiarity principle, which prevents the EU to lay down principles for managing and allocating infrastructure financing, and to have the ideas implemented in all member States. The paper leaves for the member States to decide on how to use the revenues. As obvious alternatives the paper mentions allocation of funds to infrastructure operators, to the general budget, or to earmarked infrastructure funds. In general the EU infrastructure managers are reluctant to co-operate in management and investments with the private sector and the market fails to reflect external costs in its prices.

The other weakness lies in the political interests of pricing externalities. EU administrators recommend that revenues related to external costs should be used to reduce or prevent the external damage or, when it is not possible, to compensate those affected in some way. Keeping in mind the subsidiarity principle, such decisions are best left to the member States. The charges should not exceed marginal social costs (including external costs) in order to ensure fair competition between different transport modes.

The US research on road user taxation (4 and 5), in case of heavy vehicles, is mainly devoted to various models for weight – distance charging, the competitiveness of transport industry, equity amongst user groups, and the administrative efficiency of preventing evasion and avoidance. In case of car use taxation the problems are partly related to level of taxation vis á vis inflation and the improved fuel efficiency of vehicles. Part of the research is devoted to finding new technologies for monitoring vehicle miles of travel for taxation purposes.

The World Bank proposes the use of traditional sources of revenues, fuel levy, annual licence fee, and weight – distance charging of heavy vehicles. The Bank is concerned that there is on place a mechanism to ensure that non-road users (farming and forestry equipment, boats, etc.) do not have to pay the fuel levy. The Bank recommends that the fuel levy is a discrete amount per litre or as a percentage of the ex-refinery or wholesale price. This ensures that the fuel levy can be clearly separated from the import duties as well as the sales, excise, environmental, and other taxes that go into the consolidated fund. There should be sufficient legal flexibility to adjust the level of levies according to the needs of the road infrastructure.

Road Tariff

The World Bank approach is linking road taxation on an commercial basis to road management. This is not same as earmarking general budget revenues, as a mean of capturing a part of the government's overall budget, for the road sector. The approach calls for bringing roads into the marketplace, putting them on a fee-for-service basis, and managing them like a business. Under this concept the users pay for the usage of roads through an explicit **road tariff** *that is clearly separated from the government's general taxes*.

The road tariff itself may be composed of many types of fees, part of them related to vehicle ownership and a major part to the vehicle usage. The annual licence fees and drivers' licence fees should understandably cover the costs of ensuring the quality of drivers and administration of the vehicle fleet. Most part of the tariff should be based on the road usage either in general or by buying permits to travel on congested time periods. The road usage tariff should be applied at the same way as tickets for trains or stamps for mailed parcels.

For collecting the road tariff from private cars the fee could be easily added to the fuel price. The collection is administratively easy, as the number of oil companies is limited. The fee, which is relative to fuel consumption, encourages, at least to some extent, the usage of more fuel efficient vehicles and the development of alternative, non-polluting vehicle fuels. In densely populated regions the tariff could contain some form of fees to cover congestion costs.

For heavy vehicles the fuel fee could form a part of the tariff. However, as the EU and the US researchers are proposing, and more recently the Swiss HVF implementation is experimenting, there should be a direct linkage between a distance – weight fee and the amount of tear and wear of the road network. EU is proposing a vignette or some form of electronic charging to form a fair tariff for both national and international transports. The present GSM or/and GPS and weigh-in-motion technologies would allow an easy access to an European distance - weight fee.

Introducing the above road tariff must not abstract revenues from the consolidated budget. The vehicle ownership and usage, by nature, contain many fees and ad valorem taxes, VAT, fines and penalties, environmental levies etc., which should be collected as general revenues. Only the amount of existing road management allocation should be converted into a fuel levy as a road tariff. The road users, in general, are willing to pay when they know that the money is actually spent on roads.

Road Fund

The World Bank recommends that *the proceeds of the road tariff shall be deposited into* **a road fund** managed by a board that includes representatives of road users and the business community. They further recommend that the fund is a legally established institution with a management board. The majority of the board members should be nominated from outside the public sector, by the organisations representing the road users. Board members, representing the people who are paying for the roads, have a strong vested interest in seeing that they are not overcharged and that the money is well spent. It should be natural that the auditor general's office or private auditors appointed by the auditor general must carry out independent technical and financial auditing.

The author of the TRB paper (5) proposes a contract between the road agencies and their customers over what should be produced by the road tariff. The road fund could act as a " "contract" between the road agency and the customers. Through a dedicated road fund the customers could understand what they are buying for the fees they pay. It would provide the investments in transportation that achieve the levels of service and meet the economic, environmental and mobility performance objectives that they desire and for which they are willing to pay

The World Bank proposes that the fund should ideally support maintenance of all roads and streets on direct or cost-sharing basis. The additional element in successful use of the road fund is that roads are managed by a businesslike road agency. Road users in the management of roads generally press for sound business practices to ensure value for money. The planning and management of road works should be separated from the implementation. The road agency should have a sound management structure and appropriate management information systems, in addition to effective ways of contracting out road works. Management of assets requires budgeting and financial accounting systems close to the private sector accounting practices. Modern quality management systems give good tools to ensure the quality of road works.

Many existing road funds are overseen by a public-private board made up of representatives from key government ministries and the main road user groups. Some are overseen primarily by government departments or ministries. The representative boards attach much importance to accountability as they represent the business community, road transport industry, farmers, and the professions. The existing road funds have some few managerial and office staff. Some funds finance only maintenance, some also rehabilitation and capital works. In countries with road funds the strongest supporters of the above system are often the ministries of finance. They see it as making road financing more transparent and as tightening financial discipline in the road sector.

Financing of Traffic Safety

Currently the costs of traffic accidents are met directly by the individual concerned or through his/her insurance policy. However, some costs are still "external", paid by the society, and not by the transport users. Vehicle owners pay usually their insurance premiums once a year, paying little attention to the non-accident bonuses. In case of company cars, there is a very weak linkage between safe driving and insurance costs.

Ensuring that insurance prices better reflect accident costs, would give infrastructure managers, road users, and insurance companies joined incentives to improve safety and to reduce accident costs. The EU Commission is proposing that further work to be carried out in examining the scope for better internalising the cost and risk of accidents through insurance schemes.

On order to cover all traffic accident costs of education, enforcement, engineering and trauma management, in addition to the present coverage, the insurance premiums need to be increased. However, this should take place at the cost of the poor performers and not on the cost of "good" drivers. Because of the violation of traffic rules, including over-speeding, clearly increases the accident risks, there should be a direct link between traffic violation and insurance costs. In terms of company cars and professional drivers, a new type of linkage between the driver and the vehicle insurance need to be created.

The zero vision approach of Sweden and some other European countries, as many other traffic safety programmes, contain very weak measures in activating individual road users' safe traffic behaviour. The approach recommended above, will bring the insurance companies to the focal point of traffic safety improvement. Traffic safety professionals are often powerless in influencing individuals for safe traffic behaviour. A strong financial incentive is often a tool for an individual to change his/her behaviour. If the payment scale of good performers bonuses is extended from the present 60% reduction to say 90% with simultaneous linkage to police reported traffic violations, the financial incentive should be of importance. On the other hand, all the traffic safety work of the insurance companies would directly benefit their cost basis in the form of lesser compensation costs. The insurance companies, having direct linkages to the poor performers, could direct their various safety campaigns to targeted road user groups.

In Finland there has been an unusually good linkage between the various players of traffic safety professionals. The Finnish Traffic Safety Committee of Insurance Companies (VALT) has been a leading insurance sector traffic safety promotion organisation world-wide, with its unique Road Accident Investigation Team system. The above proposal will bring in addition the individual insurance companies more directly to active traffic safety work in directly influencing their individual policyholders.

Conclusions

Road Infrastructure is so tremendously valuable asset in every nation that we should not let it deteriorate. Human lives are so precious that new and radical tools are needed to improve traffic safety. The roads need a steady and even flow of funds which enables a long term planning of road management. The funds should be allocated to public roads, city streets and low volume roads. All of them have an important role and need their fair share. When people know that their money is used to benefit them in a transparent way, they will accept the payment of a road tariff for the use of the national road and street network. The funds shall be managed in businesslike way as are the rail and postal fees managed. New tools and stronger incentives are needed to further improve traffic safety. The insurance industry potential has to be taken into use.

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