

## ROAD MAINTENANCE AND INTERNATIONAL COMPETITIVENESS

The present and subsequent editions of the Bulletin will deal with the issue of road maintenance, its close connection with transport costs and its impact upon the international competitiveness of the countries of Latin America and the Caribbean. When roads are in poor condition, vehicle operating costs increase by 30 to 50% or even more. Autonomous, adequate and regular funding contributes to effective road maintenance and, consequently, to reducing vehicle operating costs. Additional information on this subject, developed in greater detail by ECLAC, can be obtained from Alberto Bull: E-mail [abull@eclac.cl](mailto:abull@eclac.cl)

In a highly interrelated and increasingly integrated world, competitiveness has become a top priority for national economies. Effective penetration and participation in the market can be achieved only insofar as goods and services are competitively priced. Failure to achieve this leads directly to marginalization.



Transport costs are undeniably among the factors which influence competitiveness. Although every link in the chain of distribution is important, roads in general, not only those which are used for international trade, play a considerable role in this respect. Appropriate design of major roads and, above all, proper maintenance of the road network, contribute effectively to lowering the cost of transporting passengers and goods. Conversely, roads in poor condition entail serious excess costs, a considerable burden on the economy.



It is well known that, when roads are in poor condition, vehicle operating costs increase by 30 to 50% or even more. This can be avoided through effective road maintenance, which is much less costly. It is not widely known that maintenance is one of the most cost-effective legitimate activities. This is confirmed by various studies which have concluded that, in the long term, every unit of currency which is not suitably invested in maintenance entails three units of increased transport costs, and two to three units of road rehabilitation costs which could have been avoided. In other words, each dollar which is “saved” on maintenance leads to the loss of five or six dollars, burdening the finances of the State and the road transport sector. This can represent 1.5% to 3% of annual gross domestic product, already a serious negative impact on the economy and one which can be as much as doubled by additional detrimental effects such as increased journey times, losses of goods, and accidents due to the state of the roads.



Despite the importance of road maintenance, insufficient resources are devoted to it; generally only 20 to 50% of the funding required. Owing to this persistent practice, barely a third of the region's paved roads are in good condition, and the figure is lower still for other roads. As a result, in recent years, ECLAC has been emphasizing the need for autonomous, adequate and regular funding of road maintenance, but on a different basis from that of the old-style earmarked taxes. Road development and improvement can be financed through traditional means such as government spending or borrowing or, where feasible, through outside contracting.

In the past, various Latin American countries have used specific resources obtained for the development of their road networks, by earmarking or allocating particular taxes, mainly on fuels. Such specific funding ceased in the 1980s, when the debt crisis led to the adoption of the principle of unified State financing, a principle which will continue to be applied.

In the long term, every dollar not invested suitably in road maintenance leads to:

- **3 dollars of excess operating costs**
- **2 to 3 dollars of road rehabilitation costs**

This represents between 1.5 and 3% of annual GDP. Increased journey times, losses of goods and accidents can double the losses.

**Source: ECLAC projections based on information provided by various countries.**

The proposed approach consists of the payment by road users of maintenance charges, in return for which they benefit from the use of roads in good condition. The receipts would be paid into a road maintenance fund, which would be a commercial entity whose main function would be to take responsibility for such maintenance. Its structure and methods should comply with clear principles of effectiveness and efficiency in the allocation of resources, and it should adopt a long-term outlook and strategy, making it acceptable to users, public and financial authorities, highway agencies and public opinion in general. Effectiveness is understood as the achievement of well-defined results, which in the case of road maintenance means keeping the road network in good condition for its users. Efficiency means achieving that goal at the lowest possible cost.

## **PAYMENT FOR THE SERVICE BY ROAD USERS**

Road maintenance can be financed in the same way as public services such as electricity, water and telecommunications; that is, the users pay for and are therefore entitled to receive the service. With a system of this type, when it functions properly, not only are the users' needs met, but also the State is permanently freed from the requirement to fund maintenance and repeated, expensive road rehabilitation. As mentioned above, economic development also benefits. On the other hand, experience shows that a sustained flow of funding for road maintenance from the State budget cannot be guaranteed, owing to growing demands on Government expenditure.

Toll roads, which represent a way of collecting money directly from users, are feasible only on a small part of the network, unfortunately, and therefore cannot solve the overall problem of road maintenance funding. The most suitable approach, thanks to its low cost and the difficulty of avoiding payment, is to levy a road maintenance tariff in conjunction with the price of fuel; it can be considered as a "shadow toll". It should be complemented by an annual access charge, which can be collected together with the vehicle licence fee, to cover fixed maintenance costs and correct the distortion caused by the fact that heavier vehicles would pay less than they should through the fuel tariff. This solution is a second-best, and can be applied insofar as no better solution is available for dealing with a problem the serious consequences of which have been discussed above.

It should be clearly understood that, despite first appearances, maintenance tariffs would not be an earmarked tax, but a payment levied indirectly for a public service. They differ from taxation in that the latter is not linked to specific services. Furthermore, the establishment of maintenance tariffs is not incompatible with existing taxes. Thus, retail fuel prices can continue to include a tax for the financing of government expenditure while also incorporating a tariff which to be used exclusively for road maintenance. Tax legislation in various countries of the region provides for the collection of revenue for specific services. In Brazil and Peru it is referred to a fee or rate "tasa" and in Colombia as a quasi-fiscal levy "contribución parafiscal".



Clearly, certain requirements must be met so that maintenance tariffs do not simply become taxes by another name. These requirements include the need for collection to be carried out separately from the national taxation system, by means of a road-maintenance fund having the necessary legal powers. The fund must be managed as an autonomous entity responsible for ensuring that maintenance is effectively carried out. Not only should users benefit from the service, but mechanisms must also be available to enable them to assert their rights.

Another necessary condition is that non-users should not find themselves having to pay, or, failing that, that they should receive appropriate compensation. This is the case with diesel fuel consumed for purposes other than road transport. One method would be to change the chemistry of the diesel fuel by adding a substance to fuel intended for non-road use. This method is currently used in many developed countries, but it calls for a good control system. Another option is to reimburse the maintenance tariff for those using diesel fuel for purposes other than road transport. This is feasible in the case of large users such as railways and industries, but it is difficult in respect of small-scale users such as farmers. To remedy this situation, compensation methods could be applied; for example, allocation to the maintenance of rural roads serving farming areas of resources collected on diesel fuel not consumed on those roads.