Vehicle roadworthiness tests are often purely symbolic.

roadworthiness test is purely symbolic, consisting in a formality giving rise to additional tax revenue. However, two examples of roadworthiness test concessions in Africa are worthy of mention: Libreville and Abidjan. In Libreville, a new test centre has been conceded for 10 years to the Société Gabonaise de Technique et Contrôle (SGTC). A vehicle check-up service began in January 1997. This centre has modern equipment able to check the main safety aspects. In Abidjan, the roadworthiness test is also under concession to a private company, SICTA, Société Ivoirienne de Contrôle Technique Automobiles et Industriels, a subsidiary of the Swiss company SGS Qualités. This roadworthiness test, which aims to rehabilitate the vehicle fleet, particularly taxis, illustrates the public authority's will to control this sector. ■

Financing the system

▼ Financing roads and ancillary equipment

Responsibility for the urban road system is usually shared between the central and municipal authorities. These, for want of adequate tax resources, are often unable to keep the roads in repair or open new roads on "spontaneous" sites. This makes it impossible to serve less well-equipped districts with high-capacity vehicles whose fares tend to be lower than those of taxis (in Yaoundé, asphalt-surfaced roads account for 20% of the road network).

▼ Financing operations

In most countries of the south, public transport demand is heavy owing to low car ownership. In Costa Rica, 70% of travel is by public transport. Heavy demand should enable operators to balance their operations. However, the erratic supply does not enable all the operators to derive sufficient income from their activities.

■ *Revenue*

•• **In a competitive situation**, fares should be the consequence of operating costs, fares of competing modes and people's ability to pay.

Example of the organization of small urban transport businesses in Brazil and the other Latin American countries

In the 1970s, the Federal State of Brazil undertook a reform of urban transport on the following basis:
- transfer of supervision of the municipality to the Federal State;
- compulsory grouping of small businesses into companies with a minimum size;
- truth in pricing policy;
- subsidies for the renewal and retrofitting of vehicle fleets.

These measures have certainly enabled the sector to modernize and move smoothly from the small undertaking to the proper company. But it took several decades for companies created under this reform to phase in modern management rules. At the same time, there were processes to integrate and diversify corporate capital, which led to all kinds of conglomerates. In the face of the overall inadequacy of supply, informal practices by company transport systems have emerged recently in cities of the south (Rio, San Paulo).

Latin American countries other than Brazil have taken a different course based more on the model of small-scale carriers grouped into cooperatives. Big public corporations have co-existed with small businesses in some cases, but have tended to decline and disappear in the 1990s whereas deregulation in this sector has increased.

Deregulation, which was an experimental and precursory experience, was taken to extremes in the Chile of the Pinochet period. However, in the 1990s, Chile engaged in a re-regulation process to reduce the negative effects of the previous model, at a time when other countries, such as Peru, were adopting the deregulation model in its most unbridled form.

But in fact, fares often remain strictly regulated and authorities do not readjust them in proportion to the increase in the cost of living. In Libreville, the taxi fare of CFAF 100 has remained unchanged since 1971. This situation is partly responsible for the bankruptcy of public corporations and gives rise to uncontrollable practices: failure to use taxi meters, increase in the number of transfers which makes transport more laborious and increases urban traffic. Such practices are bound to have their limits. In Central America and the Caribbean, fares are also very low but the obligation to use more than one transport mode or more than one vehicle raises the price of travel considerably.

All the players must define rules and a fare structure before issuing invitations to tender. It is an illusion to imagine that private operators will submit tenders without having a guarantee of revenue. And this involves first evaluating operating costs and solving the problem of fares of competing transport modes, including taxis.

It is advisable to take the opportunity of introducing or reorganizing a mass transport service (with enhanced quality of service) to phase in fare adjustments. The increase in supply resulting from the introduction of a mass transport system, or from a networking effect where the overall transport system has been reorganized, will keep the fare increase within the limits defined by the ratio between overall supply and demand. Calculations show that public bus transport can attain operating equilibrium with fares equal to or less than those of minibuses and taxis.

As fare adjustment is key to operators' management effectiveness, public authority action must be limited to setting up mechanisms to avoid an upward drift, such as ceiling fares, limits on increases. These fare adjustment terms should be negotiated with the professionals within the appropriate structure of the regulatory authority.

•• **The fare compensation issue**

This is a major outstanding problem. The failure of the State to pay fare compensation for students and "uniformed bodies" - 70% on the busy road from Abobo to Abidjan - is partly responsible for the bankruptcy of the public corporations. Free transport can no longer be considered a non-cash benefit instead of wage increases as it lowers the prestige of public transport and gives credence to the idea that the public sector offers more favourable conditions than the private sector. It is preferable for the administration to make a direct payment of a transport allowance to the beneficiaries.

Such measures should only target specific population categories. Where there is no dedicated transport system, they primarily concern students because fare reductions involve sums that can only be covered by the State. For the other categories, contractors, local authorities or administrations will finance the fare compensations. The procedures must be simple, the same for everyone and avoid compensation systems that do not involve an annual accounts clearance. The multi-year readjustments of accounts that used to take place between public corporations and the State are not consistent with the management of a private company.

The payment of transport allowances to employees or the purchase of tickets through "big accounts" with operators might solve the problem of category-based fare reductions. The reductions can be underwritten by the direct beneficiaries of the transport system, including employers, which is the practice in Brazil with the "Vale-Transporte".

•• **Specific measures to cover the running of unprofitable services**

Either a transport sector is adequately structured to run the services through the various operators who offset the deficit by their profitable activities, as in Korea, or through partial funding by the benefiting community. An agreement must be signed between the operator and the taxpayer to guarantee the coverage of operating costs on unprofitable routes.

•• **Collecting revenue**

The "season ticket" system is a little-used practice among private operators for two reasons: low income of customers and difficulty of introducing a sophisticated fare system in the absence of any integration of fares. Fraud by transport users is limited by the presence of bus conductors or touts, which are commonplace in Africa. Owing to the low incomes, this solution limits revenue losses at a low cost. It is paradoxically more difficult to control fraud by employees. The solutions consist in giving the crew a share in the day's takings or stopping the on-board sale of tickets. This is then contracted out to a distributor network, small retailer or newsagent, which will receive a share of the ticket sales. This is the case for Sotravil in Libreville.

In Central America, tickets are almost exclusively sold singly. Companies that have done away with their bus conductors have been confronted with an increase in fraud of nearly 20% in some cases. Operators are worried about this fare dodging and are trying to find solutions. The big operators are considering the introduction of ticket validating machines.

■ ***Operating expenses***

In all transport systems, the heaviest operating expenses are wages, fuel, maintenance, financial charges and write-offs. Throughout the transport sector in San José, Costa Rica, wages account for an average of 31% of operating expenses, 11% fuel, 18 to 20% maintenance and only 1% write-offs. The percentages for Sotrac in Dakar are 12% fuel, 38% wages, 12% write-offs, about 10% taxes and 18% maintenance. The big public corporations are usually exempt from tax, which is not the case for small operators where the heaviest expense is for fuel and spare parts. Calculations made in Cameroon show that fuel and maintenance account for 60% of the costs of a minibus and 44% for a standard bus. In Abidjan, for an informally-run gbaka, they amount to 47% and 41% for a standard Sotra bus. However, it is difficult to introduce tax exemptions for these budget items because it is easy to fraudulently misapply them. However, there are no problems with exemptions from customs duties and other taxes on major bus components and other public transport equipment. Tax simplification is necessary for road operators, covering road tax, the vehicle licence, the business licence, turnover tax and customs duties. This would reduce tax avoidance.

Case of employers meeting fare costs: "Vale-Transporte" in Brazil

1 – The Brazilian government's policy in the 1970s has led to steep, regular increases in fares over the past 20 years to guarantee the earning capacity of the operating companies.

2 – The "Vale-Transporte" was introduced in the 1980s to lessen these effects. This not only includes fares for certain social categories (students, school-children, the unemployed), which are underwritten by the community, but also commuting expenses, which are partially covered by the employer. A ceiling of 6% of the employees' monthly wage is set on their commuting expenses. The employer pays the difference between the total commuting expense and the employees' expenditure limits. This amount can be deducted from the corporate profits tax. The employer purchases from the operators the ticket coupons corresponding to their employees' travelling requirements.

3 – 10 years after the "Vale-Transporte" act was passed in 1986, the measure has been shown to substantially reduce employees' transport expenses. However, it has clear limits such as the exclusion of the informal sector or the self-employed. The complex commercialization of tickets also has a perverse effect. In a period of runaway inflation, operators have used these sums to invest on the financial market.

■ *Covering expenses out of revenue*

The degree to which operating costs are covered by revenue from traffic is difficult to assess for small operators who tend not to keep books. These operators often subsist in precarious conditions through tax dodging and failure to comply with labour regulations. This fact has been confirmed by studies on small private operators in Algerian cities. Difficulties of small operators result in the exploitation of employees and equipment, which cannot easily be reduced without making their structure bigger or better organized.

It is possible for larger operators, to cover their operating costs by revenue and thus achieve operating equilibrium. This is generally the case in Central America where there are no public subsidies despite fare restraints.

The task of the public authorities is thus to set up a legal, economic and fiscal framework that will enable competition to work fairly between operators, and between the public and private sector (which is not always the case), and to foster or organize training policies for up-skilling in management tools.

A better knowledge of the working of items that determine the cost/receipt ratio should improve this ratio towards operating equilibrium or even further towards a sufficient cash flow to partially replace equipment[20].

▼ Financing investment

Urban transport activities involve heavy capital assets such as infrastructure, rolling stock, maintenance facilities and equipment. Some of them, like buses, have a relatively short lifetime but others, like railway rolling stock, can continue to be used long after their write-off period. The proportion of capital assets and financial charges in the costs varies greatly depending on the financing and write-off conditions and the equipment replacement policy, but it amounts to at least 15%. All operators who seek to operate their vehicles in satisfactory conditions find it difficult to finance initial investment and to maintain and replace the assets. To enable them to survive the withdrawal of the public authority from the sector, mechanisms must be introduced to perpetuate urban transport activities. These mechanisms must be successively applied, according to clearly determined financing requirements. Some are tax measures, others are specific financial arrangements.

■ ***Tax measures***

Priority must be given to these measures because they are the "non-collection" of revenue by the state whereas subsidies are an expense. It is easier to manage without revenue that is difficult and costly to collect, than to meet expenditure. If these measures are to be effective they must be easy to use so as to prevent fraud and provide companies with substantial benefits. Fuel tax exemption must be avoided if it generates uncontrollable fraud.

Tax measures are mainly as follows:

- Exemption from customs duties on new vehicles, which will make it easier to replace the fleet by new vehicles that come with guarantees of safety, and exemptions on the component parts of these vehicles for in-situ assembly. It has been shown that levels of customs duties and other taxes on imports of new vehicles vary greatly and are higher in Africa than in Central America, sometimes in the ratio of 1 to 2.

- Extension of the write-off period to 5 or even 7 years for buses, to match the minimum technical vehicle lifetime, with the possibility of choosing between the straight-line and the declining balance method. This will enable operators to obtain credit over a longer period. Loan repayment calculations are usually based on the fiscal lifetime of capital assets. This is 3 years in Africa. For railway equipment, the extremely long write-off period, usually 30 years, should put the initial investment into perspective.

- Exemption from the part of corporate tax reinvested in the business is usually only a small loss of revenue for the tax authorities. For operators it can be a clear sign of governmental interest in the sector.

Tax measures are mainly used for incentive purposes. They are consequently accompanying measures, which are not sufficient to revitalize business activity, particularly following the failure of the public corporations.

■ ***Financial measures***

In many countries there is a severe decline or even disappearance of corporate capital. The context is one of entire vehicle fleets to be replaced and - for municipalities that must adopt exclusive rights-of-way for heavy transit systems - investments in civil engineering and rolling stock. The sums involved are always substantial. It is therefore necessary to differentiate between activity-building investments and "cruising" investments

•• **Financing activity-building investment**

This concerns high-capacity rolling stock, entire bus fleets, railway rolling stock and maintenance equipment. It always draws on public funds.

There are three policy options:

- The State or the municipality makes vehicles and maintenance equipment available and the operators have to write them off through a GIE-managed sinking fund, with revocation of the operating permit in the event of annual default. In this system, the operators gradually come to own their vehicles. It is the solution adopted in several cities of Central America, Guatemala for the bus fleet, and Santo Domingo for the bus fleet and maintenance facility project.

- The creation of an assets company with public capital, able to benefit from senior loans, with a possible contribution from donor organizations that make equipment available at a fee. This is the case of some railway concessions.

- Financing backed by a leasing company. At the market rate, this financing method tends to be more costly than a bank loan. If it is to be profitable for operators, the conditions of access must be adjusted. This requires either public participation in the corporate capital or partial payment of the rent by the public authority. There must be access to this type of financing for the purchase of small vehicles. This is a pilot project proposed to Dakar by the World Bank.

Financing arrangements have already been tested out for bulk vehicle purchases by, or with the guarantee of, the public authorities and, in some cases, with aid from donor organizations[21]: 800 vehicles in Guatemala, 600 in

Santo Domingo, 80 in Libreville, 100 in Dakar. The San José tramway project in Costa Rica, initially estimated at approximately 100 million dollars for the first 10 km-long line, involves national and international financial partners. In Santo Domingo, a household survey determined four corridors able to support exclusive rights-of-way, particularly of the tramway type. The government has already released some 300 million dollars to restructure the entire transport system. For this type of funding, most of the stakeholders are interested in BOT procedures. Studies on these projects should be backed by the beginnings of a financial solution. The task now is to develop financial engineering techniques.

•• Financing investment for replacements

In systems like those in Central America, where the public authority is not financially involved, operators admit that they find it difficult to write off rolling stock because they have no latitude as regards fares. They therefore often perform partial retrofit work on their equipment. Tax exemptions on new vehicles and major component parts should improve their financial capabilities. However, there is some doubt as to whether these measures will enable expenditure to be fully covered by traffic revenue. If write-offs are not covered by revenue, government subsidies should be provided for this sector in return for a public service providing special fares for certain social categories.

•• Using budgetary resources

Studies in Senegal and Gabon have shown that the urban transport sector's contribution to the GDP is around 7% in both cases. In 1996 in Libreville, the State collected about CFAF 48 billion in the form of sundry taxes whereas the contribution to this sector, including expenditure on roads, amounted to CFAF 7 billion. Disbursements accounted for around 15% of the sector's contribution and less than 1% of the GDP (whereas the World Bank, in its "Urban Transport Policy Paper, recommended a minimum expenditure of 1% of the GDP earmarked for urban transport). In 1994 in Senegal, the figure was closer to 1%. Additional government funding would not undermine the budgetary principle of the non-appropriation of revenue to expenditure but could

The case of Guatemala

In 1996, the municipality of Guatemala City had an inventory made of the bus fleet. In view of the results, the municipality established 3 objectives:

- improve quality
- replace the fleet
- set up an authority to regulate and control the service

Since December 1996, a municipal department has been performing this task. At the same time, the municipality has issued an invitation to tender, with the help of a consultant, for the purchase of 750 standard buses (Mercedes-Benz from Brazil) and 50 articulated buses (Volvo from Brazil). The municipality negotiated the vehicle prices and credit interest rate which was reduced from 32 to 11% in 7 years. The vehicles were retroceded to operators selected by a tender for the award of transport lines. The companies reimburse the loans on a weekly basis and write off the capital on a monthly basis by deposits in a current bank account, a solution adopted to overcome the deficiencies of any operators. The municipality had the dual task of serving as an intermediary to bring down equipment prices and of obtaining loans at an attractive rate and giving its guarantee.

The municipality reorganized the entire system by creating 17 concessions corresponding to the 17 urban districts. 32 companies were selected to operate the services with 3,000 buses, 800 of which were new purchases. The municipality hopes to replace the entire fleet by profiting from the vehicle lifetimes beyond the 7-year write-off period. The fares remain regulated but demand is strong and holds promise that write-off will be covered by revenue. The fares are included in the concession contract with a possibility for the operator to benefit from fare increases should there be a sharp rise in one of the expenditure components.

bridge the gap between the financing capacities and the requirements of this sector, according to the public authority's priority level for urban transport.

The allocation of budgetary resources to the sector must be made through simple circuits, with a ceiling on the sums involved. As an example, part of the fuel tax collected from the urban transport metropolitan area could be a source of funds for the assets company.

•• **Setting up a structure such as the Dakar Urban Transport Development Fund** supplied by budget lines, donor credit, appropriated tax or a mechanism like the French Special Fund for Major Works. From 1982 to 1988, this national public corporation was able to raise loans subject to the ability to repay, involving a specific tax on oil products.

▼ Donor organizations

- The French Development Agency (formerly CFD) was heavily involved in the urban transport sector in the 1975-90 period. This agency funded Renault RVI bus rolling stock and technical assistance to national urban transport companies in the capitals of West Africa, Dakar (Sotrac), Abidjan (Sotra), Yaoundé, Douala (Sotuc), Kinshasa (Sotraz), Conakry and Bamako (about F 1,500 million between 1975 and 1993[22]). An appraisal of these operations was made by AFD (Report by Luc Bonamour 1990-91). They only made temporary improvements in the public transport supply because they did not produce the required structural adjustments. For the past ten years, France (the Treasury, AFD, the Cooperation Department) has hardly been involved at all in this area. Outside the AFD area[23], major rail transit projects have received loans from the Treasury, and continue to do so to a lesser degree, (studies and construction of rail systems in Cairo, Mexico, Santiago de Chile, Caracas). There has been no investment of this type in West Africa, except for the Petit Train Bleu in Dakar, for which the AFD funded equipment and assistance. The AFD is involved in a few projects, including one in Santo Domingo, where it may finance the study of a mass railway transport system and/or the reorganization of bus networks in the secondary cities. It is working on the Casablanca rail transit construction project[24] on behalf of the DREE (Directorate for Foreign Economic Relations).

Although the AFD is convinced that transport is key to urban development and is a priority, it is wondering what its future aid policy should be for this sector. The problem is that urban transport is dependent upon its surroundings and no transport improvement measures can be separated from the institutional context, relations with other transport modes, traffic management and the road system. Previous experience shows that company preservation involves more than pumping in funds. AFD's support policy was consequently more an aid to the national manufacturer, which derived temporary benefit but was unable to adjust to financial difficulties in those countries or to implement solutions consistent with competitive sales prices. Another short-lived experience of AFD aid was the fund for the replacement of rapid buses in Dakar, for 10 years later the situation is back to square one. The sector still cannot finance the renewal of the vehicle fleet.

The fundamental problem is one of ensuring that the aid will be capable of fostering a sustainable system.

The AFD is a development bank which is primarily involved in long-term action. It leaves commercial activities to its subsidiary, Proparco. Yet this does not mean that export financing can be absent from its concerns. However until recently, the problem of aid for investment in rolling stock, minibuses, buses and derived vehicles, has been the lack of suitable vehicles in Africa and Central America. But we must await trials on the RVI Karossa bus, manufactured in the Czech Republic, which is intended for export to the developing countries. A hundred vehicles have gone into operation in Beirut, and Sotra in Abidjan is operating an articulated bus. Similarly, Alstom is developing a tramway, Citadis, at a cost more in line with the financial possibilities of the countries of the South.

Contractor companies, mainly small and medium-sized businesses, tend to be interested in traffic management facilities (traffic engineering, flow management, road marking).

The AFD is now redefining its action strategy for this sector. In future, it will focus on financing transport infrastructure and ancillary equipment, road stations, terminal stations, etc. and road facilities enabling better organization of the transport modes: walking, cycling, public transport, private cars and utility vehicles.

The Department of the Secretary of State for Cooperation[25] is not very active in this sector. It participates in World Bank projects and provides support for the Bank's SSATP-TU[26] programme.

The many different financing facilities are detrimental to the visibility of France's aid.

- The World Bank has been involved in the urban transport sector for many years. Its strategy was set out in the 1975 Urban Transport Policy Paper. It finances worldwide studies, assistance and urban transport projects. Its policies focus on privatizing transport companies, sharing activities between several small operators, eliminating government aid to urban transport and prioritizing road services over other heavy systems such as rail transit and tramways, in a context of structural adjustment, even in cities with millions of inhabitants.

However, to take environmental aspects into account, the World Bank now agrees to fund some heavy urban transport or transport equipment projects (particularly in the countries of Latin America and the former USSR). Under the SSATP-TU programme, it is currently financing a pilot project to develop urban transport in Dakar, which may be a reference for this area.

For the same reasons, the Inter-American Development Bank is financing an increasing number of urban transport projects. It may finance part of the tramway project in San José, Costa Rica.

- The Islamic Development Bank has just granted a F 80 million loan to Senegal for a hundred buses of Algerian origin intended for Sotrac.

- The African Development Bank has little interest in urban transport projects for the moment.

- The European Union is absent from this sector in the ACP region. Urban development only accounts for 3% of its aid. However, it has begun a sector-based study which should be followed up by projects under the future Lomé Convention.

In fact the funds exist, but today's procedures and conditionalities still largely exclude urban transport from access to multilateral financing. The realization that it is essential for cities of the South to benefit from organized transport systems is strengthened by environmental concerns in the countries of the North. Under this pressure, the coming years will doubtless see donor organizations accelerate their activities, backed up by international conferences on sustainable development.

The aim of France is to optimize the use of its knowhow, which is recognized the world over, in a context increasingly marked by international competition that benefits from official and political aid in a market with a high development potential. ■