

Countries	Total population in millions (1995)	GDP/inhabitant USD (1995)	Cities	Population in millions	Population, projection in 2010
Algeria	28.6	2,348	Algiers	3.7	5.76
Morocco	27.1	942	Casablanca	3.2	5.12
Tunisia	9	1,428	Tunis	2.03	3.17
Ivory Coast	14.23	708	Abidjan	2.79	4.36
Senegal	8.32	615	Dakar	1.98	3.09
Gabon	1.32	3,639	Libreville	0.4	0.62
Cameroon	14	661	Yaoundé	1.2	1.89
			Douala	1.3	2.06
Zaire	43.9	300	Kinshasa	4.2	6.56
Nigeria	111.7	349	Lagos	10.28	16.03
Mozambique	16.2	133	Maputo	2.22	3.47
Cuba	11	839	Havana	2.24	3.01
Dominican Rep.	7.9	5,683	Santa Domingo	2.58	3.47
Costa Rica	3.4	5,760	San José	1.5	1.61
Argentina	34.5	3,947	Buenos Aires	10.99	14.79
Brazil	159	1,003	Sao Paulo	16.47	22.09

areas often with millions of inhabitants, and the high proportion of schoolchildren are a major challenge for urban transport systems.

#### •• Contribution of cities to the GDP

Despite the urban crisis, the contribution of cities to a country's

Gross Domestic Product (GDP) is generally much greater than the proportion of the urban population in the total population. Cities have a much greater productivity per inhabitant (ratio between a city's GDP and its population) than that of rural areas. The productivity per inhabitant in Sao Paulo and Rio for instance, is respectively 1.7 and 1.5 times the national per

capita productivity. Bangkok achieves 53% of the GDP whereas its demographic load accounts for 15.3% of the Thai population. Abidjan's contribution is nearly 60% of the overall GDP of the Ivory Coast<sup>2</sup>. ■

## Recent urban transport trends

### ▼ The disappearance (or decreasing weight) of national/municipal public corporations

#### ■ *Structural difficulties of national corporations*

Audits have highlighted internal and external dysfunctions of these corporations such as : overmanning, excessive main-

tenance costs, inappropriate maintenance, uncompensated fare reductions, the end of monopoly and opening to competition with small private operators. Therefore, despite subsidies from organizations, particularly for rolling stock purchases and assistance, and the tax exemptions granted by governments, most corporations have gone bankrupt or are in great difficulty.

#### •• Cities in countries of the Maghreb

##### • Algerian cities

A recent appraisal of the urban transport situation in big cities of Algeria<sup>3</sup> has underlined the rapidity with which the role of public transport companies/boards has given way to small private operators of vehicles with capacities of between 9 and 25 seats.

Before 1987, urban transport services were almost exclusively provided by public operators usually under local authority control. In 1987, it was decided to liberalize this sector. This opening up was immediately followed by a proliferation of private operators and an overall increase in supply (doubling of the minibus and taxi acquisition rates, with more than 22,000 taxis for the six cities, half of which in Algiers).

Algerian cities have characteristics similar to those of the countries of the South: rapid urban growth with increasingly marked imbalance between stagnating city centres and underequipped, fast-growing fringe areas. Their population is young (50% aged under 20), 50% of travel is from home to school or college. There is a low car ownership ratio (7% of households have a car compared with nearly 50% in France). The public transport service is inadequate and nearly always saturated (the average public transport service is 0.3 bus per 1,000 inhabitants, whereas the standard adopted by the World Bank is 1 bus per 1,000). 62 to 68% of movements are on foot depending on the city, and public transport accounts for around 20% of trips. At the same time as the weight of public corporations has dwindled and the private transport supply has increased, taxis have come to play a much greater role - between 7 and 12% of the market. Specialized transport provided for employees and students by big companies and some administrations has a sizeable, underused vehicle fleet and plays an important part in

meeting the deficiency of regular services.

In Annaba, the public corporation has disappeared. In Setif and Constantine, corporations now only have a minor role. They no longer provide regular lines but handle specialized transport. They also seem doomed to disappear eventually. In Algiers (ETUSA) and in Oran, public corporations still play a significant part (more than 30% of motorized travel) thanks to aid, albeit irregular, from the public authorities. The chronic deficits of the public corporations are mainly due to a lack of control over expenditure and a freeze on fares<sup>4</sup>. Pre-crisis status reports on public corporations show that they had a real organization with administration, operation and maintenance services but they suffered from a lack of skills on the part of the managerial and maintenance staff and from overmanning.

The private sector is made up of small-scale undertakings. The size of the operators (1.2 vehicle per operator) makes any investment in maintenance and management infrastructure hazardous. Company lifetimes are short and the turnover is extremely high. The private sector does not benefit from any public contributions or tax aids, particularly for imports of vehicles and spare parts. Their financial equilibrium is achieved by not renewing their vehicle fleets and using second-hand vehicles, by a poor level of service, low staff wages and failure to pay payroll taxes. Private operators run the most profitable lines and only during rush hours when occupancy rates regularly exceed 120%. During

off-peak hours, the service is poor or even non-existent. On the whole, the spatial cover of built-up areas is extremely deficient. The private operators' market share in regular services is 55% in Algiers, 100% in Annaba, 87% in Blida, 98% in Constantine, 74% in Oran and 100% in Setif.

By and large, the liberalization of the private sector has achieved its primary objectives of increased public transport supply, but it has also had negative effects owing to a lack of regulation by the public authorities. Despite the emergence of the private sector, Algiers suffers from a severely deficient public transport system. According to a study in 1995, the transport supply would have to be multiplied by 3 or 4 to reach the standard WB level. The ongoing construction of the rail transit system is plagued by slowness that rules out any possibility of opening the service for several years to come, despite its governmental priority. The city of Oran has introduced an ideas contest for the construction of a tramway but this has come to nothing.

- **Moroccan cities**

The urban transport situation in Morocco has evolved along similar lines. The liberalization of this sector dates back to 1986. Since then, the private sector fleet has multiplied and now exceeds the state-managed fleet in major cities of Morocco. In Casablanca, it amounts to some 400 vehicles compared to 350 under the transport board, which provided a fleet of 650 vehicles ten years earlier. The problems of transport boards have the same causes: overmanning, bad management,

uncompensated performance of public service missions, school and student bus services, mandatory services. The Casablanca transport board is almost bankrupt. The operators' quality of service has deteriorated resulting in market sharing based on travellers capacity to pay - private operators have captured the solvent customers, the national corporation handles customers entitled to reduced fares.

Until recently, the Moroccan political authorities were in two minds as to whether to maintain a "minimum" public corporation or to privatize the entire sector. Recent student action against the inadequacy of transport in Casablanca has resulted in a body of measures in favour of the transport authority: purchase of fifty second-hand buses from the Paris public transport system (RATP) and authorization to call for international tenders with financing proposals for the purchase of 100 vehicles on the basis of specifications drawn up by the Transport Board.

But the Moroccan private sector differs somewhat from the situation in Algeria. The vehicles are mostly of standard loading capacity but the fleet is becoming obsolescent; the operators run the authorized lines. However they do not completely meet their obligations, particularly the payment of a fee to the transport authorities for the operation of services on their lines. In addition, over the years, companies have merged and decreased in number: 5 or 6 in Casablanca, with large companies operating networks in other cities. The introduction of surface rail transit system in Casablanca is under discussion. France has just granted 30 million francs worth of funding for the feasibility studies of the first line.

- **Urban transport in Tunis**

The trial public transport experience in Tunis is an original one in the cities of the Maghreb as this is the only city that has developed a light rail transit system (or modern tramway) which in 1997 included four main

lines over some 42 km. This was not achieved without difficulty but it was successful and met users' wishes. However, there is some concern that it will be the victim of its success and too much will be expected of it, obliging the authorities to study and plan further regional railway infrastructure to keep up with present urbanization and demand trends.

In Tunis, urban transport services are provided by two major national corporations: SNT (bus service) with about 75% of the traffic and SMLT (light rail transit) with 20%. The private sector is marginal. However the authorities are wondering what the future holds for SNT. Several operations are in competition: the maintenance of a national corporation with development of activities; opening up to the private sector while maintaining public corporate status; fragmenting the corporation into a number of private operations.

*(cont'd on page 21)*



Light rail transit system in Tunis.

## Light rail transit system in Tunis: history and construction

In 1975, the principle of a rail system was approved by the authorities and, after the detail design work, an invitation to tenders in 1979 led to the selection of Siemens in 1980 and the start of work in 1981. The construction of the first two southern and northern lines crossing in the city centre met with many difficulties, the main one being the successive reappraisals of the line layout in the centre and constant debate opposing a surface crossing option to an underground option in the centre. The southern line, without a crossing in the centre, was opened in 1985, and in 1987 the new President of the Republic decided in favour of a surface crossing. The final design work of the railway in the centre took into account a traffic plan in order to exclude transit vehicle traffic. The construction of the other lines progressed without too many problems.

The cost of the project over the period 1981-90, corresponding

to a basic project of four lines, was estimated at TD 300 million (1993 value), the equivalent of FF 1.8 billion. Compared with initial estimations, the cost overrun was 140% in the legal currency. This mainly concerned the buildings and engineering structures (370%), the coordination and studies (274%), compulsory purchases and mains diversions (198%). Despite these extra costs, the investment cost is reasonable by international standards: the average cost per kilometre is estimated at FF 60 million (1993 value). The traffic level is high, around 8,000 to 10,000 passengers at rush hours on the busiest lines.

The weight of the rail system in the modal split has risen: 6% in 1986, 20% in 1997. From a financial point of view, the operating costs were covered to 120% by fare revenue in 1993, which also met a few of the write-off expenses of the investment, but most of the investment and loans were covered by the State.

The debt coverage ratio is 74% if write-off expenses are charged against the rolling stock.

The rail system stopped the decline of the city centre, restored a certain locational attraction and helped to modernize its image. And it was increasingly visited by different population groups (young and working populations). The rail system also made some transfers possible from the private car to public transport. The success of the rail system also had the effect of eliciting demand for services in outlying districts and some line extensions were decided by the authorities. Today, the rail system is an urban integrator that will ultimately give a face-lift to the districts through which it passes.

## The case of urban transport in Dakar, Senegal

The various stages in the public authorities' transport policy have left their mark on the public transport system in the city of Dakar, which can provide a useful example through the lessons to be learned from problems and hesitations in shaping this policy.

\*1987-89: Urban train project and restructuring of the sector. The Dakar Cape Verde urban train project, "le Petit Train Bleu", was built further to the Sudreau report which aimed to give a new lease of life to African railway projects likely to interest the French railway industry. Aid from France was subject to conditionality on the reorganization of the sector, which was to include the creation of an organizing authority and the coordination of the operators. Assistance from the CFD amounted to more than F 100 million for a vehicle improvement programme and a crash programme.

\*In 1992, the Saly seminar was the first initiative for a meeting of the stakeholders, with guidelines for defining a comprehensive policy for the future of Sotrac, the organization of a rapid bus service and the creation of a monitoring committee. Discussions centred on funding for the renewal of the rapid buses and the restructuring of Sotrac towards greater efficiency and financial recovery. The CFD was

extremely critical of Sotrac's failure to fulfil its commitments in response to the loan issued in 1991 (larger instead of smaller payroll, wage increases).

\*1994-1997: the World Bank negotiated an urban transport sectoral project.

The sectoral policy document underwent many, often difficult redraftings and discussions between the Senegalese authorities and the World Bank. In 1996 these finally resulted in the official launch of the urban project and a series of tenders for the overall restructuring of the network. This covered the Petit Train Bleu, Sotrac and the rapid bus service, the privatization conditions of Sotrac, the creation of an urban transport financing fund, and the conditions for setting up an assets company which would form the real originality of the project by separating investments from the future Sotrac company. World Bank funding covers all these aspects.

\* Today, Sotrac is a dying company. Its decline, like that of the other national corporations, has extended over many years. The bus service covered the main routes of the city as far as the outer suburbs. Its travelling public was formed of civil servants and schoolchildren. The company provided two-thirds of public transport requirements in 1980 but only 2 to 3% by mid-1997. The

Petit Train Bleu serves the Dakar suburbs (Pikine) and has been quite successful, with traffic of up to 20,000 passengers per day. At present, its influence is limited because of its inadequate supply (signalling, track condition, number of trains) and a failure to recover patronage from the other modes. The Rapid Bus service, consisting in twenty-seater vehicles run by small operators, is characterized by its operating flexibility and its ageing fleet. The number of vehicles in service is estimated at between 2,000 and 3,000, which provide some 85% of public transport requirements. In addition, private taxis co-exist with shared taxis and a host of clandestine taxis. The emergence of illegal transport reflects the inability of public transport supply to satisfy demand. The limited number of roads in the city of Dakar causes major congestion problems which require modal management measures over the short term. A call for tenders has been made for the concession of the old Sotrac lines and the operator is in the process of being selected.

\* **In San José, Costa Rica**, 300 taxis and 32 companies provide the urban transport service in the metropolitan area which includes 33 municipalities and 1.5 million inhabitants. The vehicles are standard in type. Companies operating in the city centre have an average of 20 vehicles, the others about fifty vehicles. The buses were acquired in 1981 by the State, which resold them at half price to the operators who were to be in charge of maintaining and renewing vehicles and equipment. The companies are organized in cooperatives and purchasing pools for fuel and spare parts. The biggest companies have maintenance facilities. The lines are normally

allocated by the Ministry of Public Works and Transport. In 1997, the average vehicle age was 8 years but the average chassis age was 15. Competition from illegal operators and a limitation on fares are inducing operators to rehabilitate their vehicles rather than replacing them. Vehicle replacement has concerned 8% of the fleet whereas as it should be 15% per year. No population category is entitled to reduced fares compensated by the authorities. For the capital San José, the President of the Republic has defined a sectoral strategy based on a will to develop an interurban network, a freight network and a tramway-type urban transport system, all based on the railway mode. A still-recent

railway culture and abundant hydroelectric resources justify these projects. The Ministry of Transport remains the supervisory authority for urban transport but the Municipality of San José is closely involved in the tramway construction project, sometimes overstepping its real responsibilities, particularly as regards roads. The project policy is backed by the Municipality, the Ministry of Transport and the National Electricity Company. The Municipality wishes to take advantage of the renewal of the bus operators' concessions, which expire in the year 2000, to reorganize the entire system around the tramway.

\* **In Santo Domingo**, for a population of 2.5 million inhabitants, the number of vehicles is 280 buses, 1,700 minibuses, 1,250 microbuses, 6,000 shared taxis and 2,600 private taxis. There are many operators and many trade unions. The rapid development of the city, people's mobility and the number of cars contribute to traffic problems in the city centre. The number of trips, all modes included, is estimated at 2 million per day. The level of service is poor, with an ageing public transport fleet. Faced with the difficult, politically-sensitive urban transport situation, the Department of the Secretary of State for Public Works and Communications conducted a study on urban transport in Santo Domingo, funded by the World Bank, which made recommendations to improve the sector over the short and medium term.

The government released 285 million dollars for the reorganization of the sector. A local consultant and a Canadian consultant analysed the situation and made proposals for the reorganization of the sector. Five measures have been implemented:

- Creation of a regulatory transport authority covering the metropolitan area, Autoridad Metropolitana de Transporte (AMET) which brings together the municipal authorities, the municipal police, the technical transport office and the office of the President of the Republic, within its executive committee;
- Reorganization of the municipal police involved with urban transport, who come directly under the regulatory transport authority;
- Appraisal of supply and demand, with a household survey that enabled a list to be

made of the supply capacity and road investment required to improve commercial speed: 4 major corridors could receive rights-of-way;

- The purchase of 600 standard buses at a favourable rate thanks to a government guarantee on a loan from the Brazilian Export Bank associated with local banks, with the retrocession of vehicles to the operators;
- A project to set up a public maintenance facility with the possibility of opening up the capital to private funds.

In Santo Domingo, under the impulse of the local consultant, the reforms are well-advanced. Inquiries to France concern the feasibility study of the first tramway line which may be equipped with French stock. Alstom is making an offer of Citadis equipment.

..... Cont'd from page 17

This hesitation is reflected in the situation of the company to which the permits for the vehicle purchases and line extensions are given, but at the same time personnel recruitment is blocked. A study initiated by the Minister of Transport, on the institutional urban transport system for the District of Tunis will doubtless remove any uncertainty about SNT's fate. In the absence of this organizing authority, coordination between the two main urban transport companies is unsatisfactory and bus services operate on the same routes as those of the light rail system. Similarly, transfers at specifically-designed interchange points are carried out in poor conditions for the user, with unreliable, and sometimes long waiting times. Fare integration has not yet been organized, which poses the upstream problem of the inter-company financing rules.

#### •• The case of the countries of Sub-Saharan Africa<sup>5</sup>

In Sub-Saharan Africa, national public corporations for urban

transport have practically all disappeared (Sotravil in Libreville, Sotraz in Kinshasa, Sotuc in Cameroon, Sogetraz in Conakry). The causes of their disappearance have been fully analyzed, particularly in Luc Bonamour's report, CFD 1991, and in the report "Study on Urban Transport in Sub-Saharan Africa", CFD, 1994.

The reasons are broadly the same as those identified earlier for the national transport corporations/boards in countries of the Maghreb. The causes are endogenous - overmanning, low overall labour productivity, poor management, inappropriate maintenance, high operating costs, uncompensated public service missions. They are also exogenous - improper government control, competition from private operators, financial crisis in countries that have phased out financial aid. Added to these general reasons are those specific to the countries of Sub-Saharan Africa. They include the devaluation of the CFA franc, which has led to increases in the

prices of vehicles, spare parts from France and the price of fuel which companies have not managed to integrate into their fares. France's substantial aid has been unable to prevent these corporations from disappearing.

Since 1994, Sotuc (Yaoundé and Douala networks in Cameroon) has received a liquidation order. Sotrac (Dakar) has almost gone into liquidation and Sotra (Abidjan) is experiencing considerable financial difficulties<sup>6</sup>. Sotra, which operates the Abidjan urban transport network, is still the benchmark in Africa for its technical and management performance. It has operated a fleet of more than 1,000 standard and articulated buses and for a long time it was in operating equilibrium. Today's difficulties are mainly due to its economic and financial environment including the freeze on fares and the cutback in governmental aid. Sotra's future is in the balance at the moment because of the privatization policy initiated by the Ivory Coast government and the opening up of the urban transport sector to private operators.

Rapid buses in Dakar.



For Sotuc, which has been declared bankrupt, the liquidation of the corporate assets has not enabled a transfer to the private sector for several reasons:

- The State’s refusal to regularize the financial situation, which has stopped the sale and/or redeployment of the rolling stock and the operating and maintenance facilities that have deteriorated and now require costly repair before they can be used;
- Absence of or delay in setting up an institutional framework, which has not enabled the private sector to resume activities in an organized manner.

•• **Urban transport systems in the Caribbean and Central America**

The similarities are mainly the urban development patterns, the population growth and the crisis in the transport systems, with escalating mobility, inadequate supply, poorly maintained vehicles, lack of regulations, the development of informal transport, pollution, congestion

and insecurity. The private sector provides the service but with financial problems owing to inappropriate fares and not enough or no subsidies.

The systems differ in that their vehicles are usually standard in capacity and are kept in better repair than in Africa, sometimes even replaced by new equipment. But the main difference is their better organization of a fragmented sector. In several cities (San José, San Salvador, Santo Domingo), the operators have organized themselves in cooperatives on a self-regulating basis.

San José (Costa Rica) and Santo Domingo are two interesting examples of an overall transport policy project that includes immediate measures to renovate the bus system and exclusive right-of-way projects.

■ ***The development of small private operators***

The cutback in supply further to the disappearance of the public corporations, or difficulties in keeping the fleet in service for corporations still in operation, has

left the way open for private operators who have taken over from the public sector.

The development of private operators (not only small businesses but also big owner-employers of salaried drivers)<sup>8</sup>, made possible by the liberalization and deregulation of this sector, sometimes places them in monopoly situations (Douala, Yaoundé and Libreville, for instance) or enables them to block the system (In Dakar, the rapid bus service met 18% of peak hour travelling requirements in 1980 and 62% in 1992 for the morning peak hour)<sup>9</sup>.

Population growth, urban sprawl and the increase in urban mobility show the limits of small operators, with an incomplete service at peak hours, poor coverage of the network and an inadequate school bus service. Systems are introduced that coexist with the regular services for the transport of employees (Algeria, Libreville, Douala). And in Cameroon, there is even an attempt by the Teachers’ Mutual Benefit Society to set up a special school bus service to make up for the deficient, expensive existing service. Urban congestion due to the increase in numbers of small vehicles incurs

Prices per passenger place in Africa (1997)

Vehicle type	Standard, tax included low price	Standard, tax included high price	Tourmobile	FB13 HINO	minibus
Number of seats	70	70	36	39	15
Total number of places	100	100	40	50	20
Price, tax included	CFAF 50 mio*	CFAF 90 mio	CFAF 26 mio	CFAF 40 mio	CFAF 15 mio
Price per place	CFAF 500,000	CFAF 900,000	CFAF 650,000	CFAF 800,000	CFAF 750,000

\* In Central America, prices tend towards the lower bracket. However a recent increase in prices of around 20% has been recorded for Mercedes-Brazil.

high socio-economic costs (pollution, congestion, fuel expenditure, traffic accidents, delays, absenteeism, etc.)<sup>10</sup>.

The sector of small private operators is nonetheless an economic activity that provides local employment, even if it is insecure and a source of tax evasion. It contributes substantially to a redistribution of income.

In Libreville, in the absence of high-capacity urban transport, taxis and dialtransport accounted for 27% of household spending on transport. This amounted to CFAF 42 billion out of 160 billion, and nearly 80% were pumped back into the national economy in the form of wages and maintenance expenditure. Because the urban transport sector is not exposed to international competition, it is a major factor of economic and social stability through the income and jobs it generates.

*It is beyond question that the “takeover” of the public transport market by private operators, despite all its shortcomings, has preserved a minimum travelling capacity and, for that very reason, has strengthened the urban fabric and local economies. But the limits of the present system based on small operators make it necessary to explore new organizational structures. These require greater capacity levels both to cope with present and foreseeable demand and because medium-term growth in demand requires heavy investment right now, which will have to be phased over time, but without excluding the private operators who have provided public transport services over a period of several years.*

### ▼ Devaluation has weakened the transport sector

The 50% devaluation of the CFAF on 12 January 1994 brought about a retail price rise of 30 to 40% in the first year. But inflation was soon curbed because the progression of nominal wages in the public sector, followed by the private sector, was held well in check. With the lifting of the price freeze on some essential goods and services, there has been a slight increase in inflation in some countries but without changing the general trend.

The urban transport sector has borne the full brunt of the devaluation without deriving any benefit from it. This is because its activity is strictly national, with no export bonus to be gained from the devaluation, whereas imports of vehicles and spare parts have become much more expensive and their customers' income is reduced because of the wage squeeze. This sector experienced a particularly strong «scissor» effect at a time when there was a severe downturn in the situation of public corporations (adverse income statement and non-renewed rolling stock).

As a result of this devaluation, there has thus been a marked deterioration in the situation of the urban transport sector. The present state of disrepair of vehicles, owing to the increased prices of equipment, has manifestly given rise to a quantitative and qualitative decline in the service, compounded by crucial adverse effects such as accidents or pollution.

•• **The renewal of equipment pools** consistent with sustainable activities has been made still more difficult. Private and public operators are unable to look ahead or make provision for write-off in order to replace their equipment.

- In the wake of the devaluation in Africa, the prices of buses automatically rose by 30 to 40% to levels out of all proportion with local operators' resources, particularly in the private sector. In Abidjan, the SOTRA RVI<sup>11</sup> buses cost CFAF 140 million for the S105 buses and CFAF 240 million for articulated vehicles. Buses assembled in Abidjan cost CFAF 80 million for standard 100-place buses. The prices exclusive of tax in Libreville are in the range of CFAF 70 to 80 million for vehicles assembled in situ with engines and chassis imported from Germany or Sweden. Vehicles imported from Asia are considerably cheaper (about CFAF 50 million, tax included, for door-to-door deliveries).

In Africa, local tax-inclusive prices of medium-capacity vehicles (30- to 40-seat midibuses) are between CFAF 20 and 40 million for bulk purchases (more than 50 vehicles). Local tax-inclusive prices of small 15-seat vehicles are about CFAF 15 million.

- In Central America, prices stand at between \$60,000 and 80,000, tax included<sup>12</sup> for new vehicles equivalent to standard types. This puts their

prices on a par with those of vehicles assembled in situ in Africa. Most of these vehicles are imported from Brazil (Mercedes Brazil). Used vehicles are half-price and therefore more expensive than used vehicles imported into Africa from Europe.

Based on these prices, it costs between CFAF 1 and 2 billion to equip a bus line (on average 20 vehicles) with new standard vehicles.

The purchase price of low-capacity vehicles has no significant price/place advantage compared with higher-capacity vehicles, whereas their maintenance costs can be prohibitive (petrol engines, over-intensive use, excessive laden weight). High-capacity vehicles provide a solution more in line with their use as regards capacities, purchase prices and costs.

- Used vehicles are a makeshift solution because on the second-hand market, midi and minibuses are rare, expensive and/or too old, and standard European buses, which are now more plentiful on the second-hand market, are too sophisticated to be used over the longer term without a fully-engineered maintenance system. This will be still truer for future generations of buses.
- The long-term situation for the taxi market will be different because the second-hand market will be well-supplied with European road-worthiness tested vehicles. These will consequently be

written off more quickly while remaining in good condition. But the rise in the price of imported vehicles will result in disrepair of the fleet because the owners will not achieve a sufficient cash-flow to renew it<sup>13</sup>.

This devaluation-related rise in price of imported vehicles, combined with fares that remain regulated, has consequently produced an erosion of the taxi-owners' cash-flow.

•• **Increase in costs of maintenance and spare parts**

A study by Sotrac in Dakar, in February 1994, evaluated the impact of the devaluation of the CFAF on the company's income statement. Raw materials and unprocessed imported products, spare parts, batteries and battery products, tyres, paint for buses, ticketing system components, small tools, the write-off of bus purchases and other investments recorded a 100% rise. Manpower costs were adjusted upwards by 15%. Income estimates were adjusted on the basis of the 20% level authorized by the public authorities.

•• **Erosion of people's capacity to pay**

The erosion of purchasing power due to the economic crisis and devaluation do not enable people to cope with increases in fares, which vary from one country to another, at a time when there is a steep rise in the purchase and maintenance price of private vehicles. The increase in fares authorized by the Dakar public authorities was 20%.

The consequences are three-fold:

- an increase in walking which can account for up to 50% of travel,
- a decrease in mobility,
- a rise in transport expenditure which in some cases, can amount to 30% of household budgets. This ratio is also recorded in the budgets of other areas such as Central America and the Caribbean.

▼ **Problems posed by the transfer of urban transport responsibilities to local authorities**

Most legislation on decentralization and local authorities is recent and is being phased in gradually. It usually makes communes and/or associations of communes responsible for urban transport, road matters<sup>14</sup>, traffic and parking.

A number of problems have emerged:

- The limits between the responsibilities of the central and local authorities are not always clear, which results in overlapping. Analyses have highlighted the many ministries and agencies involved in the urban transport sector, each acting in a specific field (roads, transport service regulations, control of public corporations, taxation, fare compensations) in an uncoordinated manner. The transfer of responsibilities to local authorities involves a reorganization of the powers and responsibi-

lities of the relevant central administrations, which should no longer be directly involved in management activities. This reform is getting off to a slow start.

- The need to improve urban services is a generally accepted fact, if only because of the pressure of public demand. It is often addressed at the highest local policy-making levels. But local authorities lack financial and human resources, which makes it difficult for them to implement improvements. Urban transport involves many transport operators, often competing with one another. This makes their organization complex and confrontational (unlike other urban services which are state-controlled or managed by a public service contract delegated to one, exceptionally more than one, assignee). For this reason, the proposition is for *ad hoc* regulatory authority structures to be responsible for urban transport which groups together institutional partners and involves professional and user representatives. Here again, the creation of such regulatory authorities meets with major difficulties because they challenge the roles and powers of existing institutions.

When the State was in charge of urban transport, it set up and supervised national public corporations or transport boards, often in monopoly situations. This is still the case in Tunisia, where the Ministry of Transport

supervises SMLT (light rail) and SNT (buses) in Tunis and companies in other Tunisian cities. It is also the case in Morocco, where the Ministry of the Interior supervises the urban transport boards, RATC in Casablanca, for instance. Sotra in Abidjan and Sotrac in Dakar have the status of a national corporation. In Algiers, Etusa has EPIC status (an industrial and commercial public undertaking) and remains under State supervision. The institutional reform will profoundly modify structures, relations between partners and the status of many companies. And this will take time. ■

## Conclusion

*This analysis shows that the public transport systems in the large cities under study and in the cities of the South in general, are in a state of crisis. This crisis is particularly acute on the African continent. The analyzed causes show similarities between the continents:*

- *socio-economic and urbanistic causes (accelerated urban growth, fringe development of cities, high population growth);*
- *economic and financial crisis in some countries of francophone Africa, made worse by the negative effects on the urban public transport sector, of devaluing the CFA franc;*
- *crisis within this sector due to the disappearance of the highly-structured national corporations and the haphazard development of*

*small, unstructured private operators that find it difficult to sustain their activities in acceptable qualitative and quantitative service conditions;*

- *the lack of a regulatory authority in charge of organizing and coordinating the transport modes.*

*The limits of the way the present systems work have been emphasized, in terms of their capacity to meet increasing travelling requirements, and in terms of the effects on the community and the environment: pollution, traffic build-up and accidents.*

*If current trends continue, even with the necessary improvements to the organization of this sector, the gap is bound to widen between public transport supply and demand, simply because of the “mechanical” effect of the quantifiable increase in the urban populations of the cities studied.*

*In these conditions, how far can we drift along in an uncontrolled scenario?*

*In Dakar, for example, the “drifting” scenario studied in the 1994 forecast made it necessary to anticipate the increased ageing of the vehicle fleet, which resulted in a decline in the use of urban public transport and in mobility.*

*Based on this observation, if the downward trend of urban transport is to be reversed, transport policies as a whole must be urgently re-examined: the institutional aspects, fleet capacities, modal complementarity and financing methods. If we do not react now, dangerous situations are liable to become firmly established - user demands, capacity of carriers to obstruct urban activities - and hamper the implementation of systems capable of satisfying increasing demand. This will drag out still further the investment burden, which will then become financially unbearable.*

