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CLOSING A GAP BETWEEN WISHES AND RESOURCES: APPROACHES TO PUBLIC TRANSPORT IN NORTH AFRICAN CITIES

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1. INTRODUCTION

1.1 Rapid population growth experienced in Algerian, Moroccan and Tunisian cities over the past two decades has placed a heavy burden on their mass transport services. The public sector, typically through a specialized agency of the national or municipal governments, has been the dominant supplier of these services. At various dates during the past five-six years, first in Morocco and later in Tunisia and Algeria, it became evident that public-owned transport companies had not succeeded in reaching desired levels of service, in terms of availability, waiting times, on-vehicle travel times and comfort. The enterprises themselves had aged assets, poor facilities and staffs which, though large, lacked the skills necessary for efficient operations; their finances were precarious and their perspectives dim. Following this realisation, significant initiatives were proposed and occasionally implemented to improve urban public transport in the major cities. These efforts, most of which are still underway, have involved national and local governments, foreign consultants, aid agencies and financial institutions.

1.2 The objective of this paper is to review the genesis of the above problems and compare the different measures and approaches adopted to improve public transport in three specific, large cities. It is hoped that the paper will be helpful to transport planners involved with these or similar initiatives. This account is based on experiences the writer has gained through participation in studies and/or actual projects in Casablanca, Algiers and Tunis. The comparative approach was selected because differences stand out sharper against a background of similarities.

1.3 To begin, the following section provides brief urban/country backgrounds and the related transport demand characterictics in the three cities. The next four sections describes the suppliers of urban transport services in

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Algiers, Casablanca and Tunis, the quality of these services from the passengers' point of view, internal performance of companies, the underlying problems, and the recent action programs undertaken or considered. The concluding section discusses the principal unresolved issues.

II. THE BACKGROUND

The urban/country scene

2.1 The three cities featured here come from countries with many points in common. They are Arabic and Mediterranean, with Islam as the major religion. They gained their independence from France in the 1950s (Morocco, Tunisia) and 1960s (Algeria), but many vestiges of the colonial period remain (bi-linguicity, administrative structure). Morocco is a kingdom, the other two countries are republics. Algeria and Morocco have each about 23 million people, while Tunisia is much smaller with 8 million people. Algeria is the richest of the three, with 1987 GNP per capita of $2680 (1); its relative prosperity in the 1970s was fueled by exports of oil and natural gas. Morocco is considerably poorer at $620 per capita, and Tunisia is in between with $1210 per capita. (The UNDP's Human Development Report 1990 ranks Tunisia ahead of Algeria, after correcting the GNP for the purchasing power, life expectancy and adult literacy). Algeria's economy has been almost exclusively the purview of a centrally planned public sector. In Morocco and Tunisia, public sector has always played a major role, but private enterprises thrived as well; tourism, agriculture and phosphates are key export activities. All three countries are in the process of making structural reforms oriented towards a larger role for markets and private initiatives.

2.2 A characteristic shared by the three countries is that, since independence, their urbanization rates exceeded considerably their population growth rates. In the mid- to late 1980s, more than 40% of Algerian and Moroccan populations and more than 50% of Tunisians lived in cities. Each of the three urban areas featured here is the principal city in its country, with Casablanca the largest with about 2.5 million population, up from 1 million in 1960. The Algiers metropolitan area has 2.3 million, with about 1.5 million for the city alone (compared to about half a million inhabitants in 1962). The Tunis area is the smallest with 1.6 million vs. 1 million in 1975. With population growth, urban areas expand spatially and start linking with other regional centers. This has tended to increase average distances traveled for home to work journeys.

2.3 All three cities are adjacent to large water areas. Casablanca is on the Atlantic coast, but has no other topographic constraints to development; its road network is therefore of a regular, ring/radial pattern. Algiers is on the Mediterranean; with the exception of a narrow, flat coastal strip, its terrain is mountainous and prone to seismic activities. The resulting road network is sparse, curvy and poorly interconnected, thus subject to sudden and frequent "locking up". Tunis is adjacent to the Mediterranean, but has developed in an hourglass pattern, its centre squeezed between two lakes. Unlike the other two cities, non-central and even intercity travel has no choice but to traverse downtown Tunis.

2.4 The central areas of each city reflects both their pre-colonial and French-dominated eras through co-existence of a traditional Medina alongside a square-grid, European-style centre. In Casablanca and Tunis, the Medina has maintained its attractiveness as a place of intense commerce in crafts, food and clothing, as well as a location of high-density dwellings for the lower-income population. From the transport point of view, the Medinas can be traversed only on foot and any vehicular access is difficult. The Casbah of Algiers has retained a high population density, but has decayed as a centre of commerce. Outside the Medinas, and some public housing estates, land use densities tend to be low.

2.5 Much of the population growth is due to poor migrants from rural areas, who move into urban communities by joining or creating peripheral shantytowns (les bidonvilles), searching for and holding marginal employment. Difficult transport problems arise when new industrial estates and other employment opportunities locate outside the centres of cities, in different peripheral areas, in that the traditional public transport networks are highly radial and thus not well suited for the many-to-many type of origin-destination pattern.

Transport Demand Characteristics

2.6 Four characteristics dominate transport demand in the cities studied herein. First, incomes being low, the degree of auto ownership is low to modest. Based on some very weak data, the household motorization rates are about 25% in Tunis, 30% in Casablanca (4) and 36% in Algiers (5). Also, households tend to be large; even with a vehicle available, most family members must rely on walking and/or public

transport. In Casablanca, for example, 85% of people have no access to a car. Walking, of course, becomes more difficult as cities grow beyond the medium size. Second, the size of the school-age population is staggering: Algiers is an extreme case of this with 63% of the population under the age of 24 (1980 datum). An important sub-group of the young are school dropouts, or graduates without work. Third, the incidence of poverty is high, particularly among recent urbanites living in slums on the periphery, distant from the potential jobs. Poverty data for all countries and for individual cities are not available; in Morocco, where this problem is the most acute, it is estimated that 28% of the total urban population is under the poverty threshold expenditure of $246 per person per year (7). Fourth, in some cities (Casablanca) and in some activities in any of the three cities (school), two-session days remain in use, thus doubling travel requirements.

III. PUBLIC TRANSPORT ORGANIZATIONS AND PERFORMANCE

3.1 In each of the three cities, a public sector bus company is the workhorse of the public transport system. In Casablanca, this is Régie Autonome de Transports de Casablanca (RATC), a specialized agency under administrative and functional tutelage of the Ministry of Interior. RATC was the monopoly provider of public services until 1985, when a number of private companies were authorized to run complementary, seat-only operations. Taxis are minimal and other forms of paratransit are not allowed. Own-account transport services are operated by a number of government agencies and private organizations. Regional commuter services along the railway line to Rabat are run by the national railway company. In Algiers, the principal bus operator is Entreprise de Transports Urbains et Suburbains d'Alger (ETUSA), until recently an agency of the urban government, now a public enterprise under the tutelage of the Ministry of Transport. Also recently, seat-only private micro-bus operations have been introduced and the taxi market was liberalized, leading to an explosion of taxis (from 7,000 in 1988 to 12,000 in 1989). Some limited regional commuter services, to a downtown terminus, are offered by the national railway company. In Tunis, the system is decidedly multimodal. The major bus operator, Société Nationale des Transports (SNT), under functional and financial tutelage of the Ministry of Transport, claims about 60% of the public transport market. Société de Métro Légér de Tunis (SMLT) operates a 20-km long suburban rail line Tunis-La Goulette-La Marsa (TGM), which links the downtown with a string of coastal communities, and a

recently completed, 17-km long, north-south light rail system, which operates in a protected, at-grade, street right-of-way. Société Nationale de Chemins-de-Fer Tunisiens (SNCFT) has suburban services in two different corridors, largely competing with the SNT and the SMLT. Private, seat-only bus operations have started on selected suburban routes. Shared taxis (voitures de louage) are authorized to bring people in from regional origins. Unauthorized paratransit is active in Tunis, particularly for regional travel (6).

3.2 This paper began with the observation that over the past five or six years, it became clear that public-sector bus companies in North-Western African cities did not fulfill expectations in terms of service provided to would-be travelers. This is, of course, a simplification. The history of individual companies shows periods of successful operation, followed by crises, followed by recovery, etc., in patterns peculiar to each city. For example, the RATC was considered reasonably successful, both in terms of service to passengers and the cost recovery, up until the second oil price shock of the late 1970s. The SNT went through a golden period in the late 1970s, following a massive rehabilitation program which upgraded its fleet and maintenance facilities. It is fair to say, however, that any attempt at improving these companies has been short-lived; services always deteriorated to a point where a rescue operation by the Government was necessary.

3.3 From the passengers' point of view, the major complaint involves simply the lack of buses relative to the potential demand. Since there has been a tendency to have large service networks (the SNT has 154 lines and the ETUSA has 110), the lack of buses is most evident in low service frequencies (rather than poor area coverage), causing long and unpredicatable waits, and overcrowded buses. Physical strength is required to fight one's way onto vehicles and people are often unable to board the first or even several buses that come by. Once on the bus, conditions of extreme discomfort prevail (50% up to double overloads were described as customary in Casablanca). Travel speeds are low, due to a combination of long boarding/alighting times, heavy loads, and a lack of protection from the street traffic congestion. For example, on ETUSA lines in Algiers, the average speed is 7.7 km/h (the range is from a maximum of 16 km/h to a minimum of 6.5 km/h). Breakdowns en route tend to be frequent, both because of working under such heavy loads and difficult external conditions, and because of inadequate maintenance. Other problems for passengers

involve a lack of direct connections for trips other than centre-bound, due to a pronounced radiality of service networks; a transfer would involve another wait and entry fight, and, for regular (non-subscription) passengers, paying another ticket.

3.4 Just how sparse the service could be can be seen from a crude indicator relating the number of buses in daily service to urban populations. In Casablanca, the RATC started in 1965 with 210 buses in circulation, resulting in a 1:6200 ratio of buses per population; this indicator improved to 1:5000 in 1982, but sank to 1:8000 in 1985 (4). In Algiers today, the ETUSA fields about 480 buses, with a ratio of 1:4800 (5). Given that about half of these buses are used for dedicated, priority transport (school children and employees of large enterprises, under contract), the situation of the "regular" passengers is not enviable. The SNT in a period of crisis in 1973 put out 227 buses for an urban population of 0.9 million (ratio of about 1:4000); in 1987, this became about 1:2600 (3), without including the supply of other modes. To see these ratios in perspective, consider Cairo with 1:1820, Abidjan with 1:820 and Budapest at 1:320 (this last datum factored to reflect all modes); some governments quote as modest a target of 1:3000.

3.5 It is common knowledge that that the major reason for having too few buses has been the poor financial condition of public-sector companies. Poor enterprise finances are usually linked to fares too low to cover operating costs and generate investment capital. It is commonly assumed that fares are determined so as to ensure that the lowest income strata can afford to use the buses. In addition to it being difficult to establish standards in this area, not much is actually known about affordability of the actual fares to various income groups in these cities. In nominal 1987 terms, first-section regular fares (used here as a proxy for the average fare paid) appear low: AD 1.00 ($0.21) in Algiers, Dh 1.2 ($0.14) in Casablanca, and TD 0.14 ($0.17) in Tunis. (ETUSA fares are overestimated in dollar terms, due to overvalued currency; since 1987, fares have stayed about the same, but the dollar is now worth about 65% more). When these fares are adjusted by the ratios of 1987 GNPs per capita for the US and the three countries, to reflect different purchasing powers, the results are: $1.43 ($0.83 using the 1988 exchange rate), $4.19 and $2.76, respectively. Judging from these numbers, fares in Algiers appear ordinary; they are on the high side in Tunis, and unusually high in Morocco, the poorest of the three countries.

IV. THE STATE OF PUBLIC-SECTOR URBAN TRANSPORT ENTERPRISES

4.1 Table 1 illustrates in a nutshell the state of the ETUSA, the RATC and the SNT in 1987. With a proviso that time-series data would be much better for understanding the dynamics of rise and fall in fortunes of the three enterprises, and a reminder that the statistics are much less than perfect, the following assertions will be made for these enterprises as a group: (1) they are in a very difficult financial situation; (2) they have low internal productivity, and, (3) they have high production costs.

Financial situation

4.2 Of the two financial indicators in Table 1, the ratio of total debt to assets shows that the accumulated debt for two enterprises (RATC, SNT) exceeds the value of their total assets (resulting in negative net worth), and the third (ETUSA) is close to that state. That these large debts are largely short-term (as shown by the second financial ratio), normally charging the highest interest rates, illustrates both the unresolved nature of the financial problems and the heavy load thereby imposed on operating costs of the enterprises. This situation has arisen because of a failure to deal with persisting operating deficits. Year after year, with rare exceptions over the last 20 years, operating costs of these enterprises have exceeded the sum of ticket revenues and operating subsidies by the Government. Their continuing operation was made possible by a practice of delaying payments to suppliers, not making contributions to social security and/or insurance funds, and short-term borrowing from banks (also in the public sector). From time to time, the Government would help by providing a capital subsidy needed for fleet or equipment purchases. Also, when accumulated results of this approach to deficit financing became unbearable for the enterprises, the pension funds, or the banking sector, the authorities would "clean the slate" by forgiving a portion of the (usually public) debt, converting other debt into equity, and by reprogramming the remaining debt over the longer term. This type of financial restructuring is called "static", since it cleans up the balance sheet of an enterprise without touching the underlying problems, i.e. factors contributing to the genesis of deficits. Its results are therefore only temporary.

Table 1: PUBLIC-SECTOR COMPANIES IN ALGIERS, CASABLANCA AND TUNIS

POPULATION/AUTO OWNERSHIP	Casablanca	Algiers	Tunis
Urban area population (000)	2456	2300	1394
No. of households (000)	-	-	267
Auto registrations (000)	132	164	60
1987 GNP/capita ($)	620	2680	1210
1987 Exchange rate per US$	8.36	4.85	0.83
Monetary unit	Dirham	Dinar	Dinar
PUBLIC TRANSPORT COMPANY 1987 DATA			
Annual passengers (mill)	200	186	218
School children (mill)	37	-	74
Service network length (km)	727	-	4562
Number of lines	84	110	154
First-section regular fare (D/trip)	1.20	1.00	0.14
First-section fare ($/trip)	0.14	0.21	0.17
Active fleet (buses)	380	909	713
Buses in circulation (day avg)	320	538	521
Average fleet age (Years/months)	7/3	8/3	6/11
Annual (million) kms run	23	26	35
Staff	3238	3778	4925
Operating revenues (D million)	202	265	28
Operating costs (D million)	199	396	39
Total assets (D million)	128	824	33
Total debt (D million)	198	720	43
Short-term debt (D million)	110	697	36
RATIOS			
Autos/1,000 population	54	71	43
Population/bus in circ	7675	4275	2676
Passengers/bus-kilometre	9	7	6
Daily passengers/bus in circ	1715	948	1147
Buses in circ/active fleet(%)	84	59	73
1,000 km/bus in circ/year	72	49	67
Staff/bus in circ	10	7	9
Staff/million bus-km	140	144	142
1,000 passengers/staff	62	49	44
Revenues/costs(%)	101	67	71
Average costs (D/bus-km)	8.64	15.12	1.11
Average costs ($/bus-km)	1.03	3.12	1.34
Average revenue (D/passenger)	1.01	1.42	0.13
Average revenue ($/passenger)	0.12	0.29	0.15
Total debt/assets (%)	155	87	131
Short term debt/total debt (%)	55	97	84

Note: When the current exchange rate of AD 8.00 per US$ is used, the first section fare in Algiers becomes $ 0.13 per trip, and the average cost becomes $ 1.89 per bus-km.

Productivity

4.3 The assertion about low productivity of the three enterprises is based on both vehicle- and staff-related considerations. (It is only fair to stress that norms quoted here are quite coarse; solid work on performance indicators based on data from developing countries has not yet been done). Fleet in daily service as proportion of the total active fleet varies from a very low 49% for the ETUSA to a middling 73% for the SNT, compared to an efficient range of 85% and higher (3,5); the RATC has a high score of 84% in 1987, but a seven-year (1980-1987) average was only 75% (4). This reflects a combination of fleet age, overuse, problems with spare parts, "pure" worker productivity, and persistent shortages of drivers to operate buses made available by their technical departments. The fleet utilization would appear in an even worse light if one considered total rather than active fleets; many buses carried on company books (89 in RATC in 1987) are permanently immobilized (waiting to be written off), or waiting for months on end, or longer, the purchase of spare parts. Annual kilometres by buses actually placed in service are dismally low for the ETUSA (49,000), but also on the low side for the other two enterprises, about 67,000 for the SNT and 72,000 for the RATC; reasonable results would fall into a range between 80,000 and 100,000 km per bus per year (9). That annual kilometrage is low reflects not only internal problems, but also several factors which are exogenous to enterprises. e.g. low operating speeds due to traffic congestion, and high peaks in daily and seasonal traffic (largely due to school-related travel). The company-related factors include dated work procedures and managerial practices, the relative size of contract vs. regular services (particularly in Algiers), and frequent breakdowns in service.

4.4 Staff productivity is also low. Each enterprise employs about 140 staff to produce a million bus-kilometres (without factoring in the overtime and part-time work); compare that with worldwide data from The International Union of Public Transport, where a bus company at the 50th percentile employs 74 staff per million bus-kilometres (10). The literature (9) quotes a 3-8 as a reasonable range for the ratio of total staff per bus in service, the higher numbers pointing to a 2-man bus operation. For the three North African enterprises, each one using a 2-man operation, this ratio is on the high side (between 7 and 10 in 1987). The situation is much worse if one looks at individual staff

categories, finding far too many people in the maintenance and administrative departments (and sometimes too few in the transport department); the SNT, for example employs 1,127 technical staff, giving a 2.2 ratio of staff to buses in service (against an acceptable range 0.5-1.5), and 1,103 administrative and "other" staff (2.1 staff per bus in service vs. a range of 0.3-0.4). In addition to public enterprises being used by the authorities to increase employment, irrespective of their normal requirements, staff hired when the fleet was being expanded must be kept throughout periods when the fleet has been reduced (since the spotty availability of investment funds, rather than the passenger demand, dictates the fleet size).

4.6 It should be noted that productivity data look much better when passenger statistics rather than supply statistics are considered. The SNT has a respectable ratio of about 1200 daily passengers per bus in service, and the RATC achieves even more at about 1700 passengers; both result from overloading buses, extreme in the case of the RATC. The ETUSA is lower at about 950 passengers per bus in service, reflecting a high proportion of contract services.

Operating costs

4.5 That average costs (per unit of supply) of the three enterprises are high is not said here with reference to any norms or international comparisons, but as an inference from observations made above. When fleet and staff productivities are low, and the enterprise has large, expensive short-term debts, it follows that costs must be high. Again, costs per passsenger-kilometre should be much lower, due to the practice of overloading buses.

4.6 Within the total cost envelope, the part due to salaries has tended to be high; for example, the proportion of these costs hovered just under 50% in Casablanca in the early 1980s (which would be very good in the industrialized countries, but twice that seen in other African and Asian cities), and remained at a high 43% even after a cost containment effort later in the decade. The ETUSA's labor cost is even higher, 54% of total costs (17). At least some of this phenomenon can be explained by the relative strength of transport workers' unions and their success through collective bargaining to get salaries higher than those of many of their passengers. Some other factors are cited below (paras. 4.8 and 4.10).

4.7 Another factor which has contributed to high operating costs has been the traffic congestion, from both the moving and parked vehicles. We have already noted low average speeds in Algiers; Tunis also has narrow roads and not much room to expand, but at least it is flat. The growth in car ownership has been considerable in each city (especially Algiers), with public transport vehicles caught in the fray. Attempts to provide bus-only lanes on major downtown arterials in Tunis were made in the mid-1970s, but proved unsustainable, largely due to a lack of support by the traffic police. Casablanca has both a larger road network and easier topography. A 26-km system of bus-only lanes and other traffic management measures, including parking controls, proposed by a study as far back as 1976, was only partially implemented. A median busway operated in one important corridor until recently, and eventually was removed, reportedly because the volume of buses did not justify the imposition on private cars.

4.8 The perpetuation of a deficit-ridden state has had its own feedback effect, adding more upward pressure on the operating costs of enterprises. The inability to provide enough buses to meet the demand leads to overloading, which tends to increase the maintenance costs and shorten the life of vehicles; overloading also increases the boarding and alighting times at stops, extending the turnaround time of vehicles. The periods when the fleet is growing and more staff is hired are followed by periods of fleet contraction, when the enterprises are unable to release the extra staff. Constant financial pressure, especially the shortage of working capital, means also not having funds to keep up with technological developments, often low-cost, labor-saving or productivity enhancing equipment and the know-how.

4.9 It is by now generally agreed that the nature of the public sector itself tends to increase operating costs and detract from services in many countries. Each of our three enterprises is a specialized governmental agency, basically a part of the civil service. The RATC is a functional outlet of the Ministry of Interior, its financial transactions controlled to the last payment approval by the Ministry of Finance; the Government controls all hiring, salaries and benefits, fares, operating and investment budgets, and purchasing. The local government has some say concerning routes and frequencies, but has no financial stakes or responsibilities in the enterprise. Similarly, the SNT is an extended arm of the Ministry of Transport; its board of directors includes some representatives of the local government, but again without any financial

responsibilities (representation without taxation). The ETUSA is also under the aegis of the Ministry of Transport, though this is a recent development, its past protector and financial sponsor having been the elected component of the urban government of Algiers.

4.10 Overall, the managerial scope in these enterprises has been extremely constrained. Salaries are exogenously determined, often having to follow a national "matrix" applicable to all staff in a given sector (e.g. land transport), without regard for differences in the cost of living in individual cities; the same approach was used sometimes for setting fares (as in Morocco in 1980), irrespective of production costs of individual enterprises. Individual remuneration has depended on seniority (routine for the civil service), with extremely weak performance incentives. Remuneration levels have generally been too low to attract and retain better-quality technical personnel, except for a thin layer at the very top of each enterprise. Staff cannot be fired for poor performance, nor for other work-related reasons (the transition to driver-only bus operation, for example, or a decrease in the fleet size). Fleet purchasing has never followed competitive bidding, but was used to support import-substitution efforts, or as a part of barter deals in foreign trade. Imports of spare parts have often been prohibitively expensive and slow to arrange, the Algerian experience having been by far the worst in this respect. This has tended to immobilize buses for too long periods and/or increase the inventory costs, as companies would stock anything they could buy.

V. UNDERLYING POLICY PROBLEMS

5.1 In addition to factors affecting operating costs and the productivity, two factors stand out as having determined the state of urban public transport in the three cities over the 1970s and early 1980s: (1) fare and subsidy policies, and (2) the identification of public service objectives with public ownership of the service provider.

Fare and subsidy policies

5.2 Low fares (more than operating costs) have most often been cited as being the key factor in persistent deficits of public bus companies in and out of North Africa. Whether operating costs have been too high or not, it is true that fare revenues have not sufficed to meet them. It is of note, however, that the achieved cost recovery ratios would look quite respectable in most West-European and US cities:

in 1987, the SNT's fare revenues (exclusive of compensation for school fares) covered 71% of total operating costs and the ETUSA operating revenue covered 67% of costs (Table 1); the RATC actually had an operating surplus, admittedly the first in 10 years (the cost recovery range in 7 prior years was quite high, though, 88-97%).

5.3 Among several problems with fare policies pursued by the authorities in Casablanca, Algiers and Tunis, three look particularly important to this writer. First, there is little evidence that operating cost trends were considered in setting fare levels at any given point in time, or that the inflation in operating cost elements was considered in deciding fare increases in these cities. Exceptionally, financial forecasts based on expected costs and fares were made for the SNT in Tunis for the first time in the framework of setting fare-related financial covenants for an investment project financed by the World Bank in the early 1970s (but these covenants were never respected). Typically, fare increases tended to be unrelated to expected costs (and, without exception, lower than costs), nor has there been a practice of forecasting deficits and matching them with necessary subsidies.

5.4 Second, the concern for the citizens' ability to pay has always been declared a major concern in fare setting, but there is no evidence that affordability calculations were ever made in the three cities, or that some parallelism has been established between the movement in the costs of living and fares. It is beyond doubt that there have been and still are social groups whose livelihood is strongly affected by bus fares, but no effort has been made to identify those who really needed help and to find ways to ensure that they, and only they, are indeed helped. Instead, a largely indiscriminate subsidy approach has been applied, without regard for large differences in willingness and ability to pay within the market. This is not to say that there have not been some cross-subsidies (from regular-fare passengers to school and other subscribers, for example, and from short-distance to longer-distance travelers). A better market-segmentation approach, both in service and price dimensions, might have brought considerable relief, as it eventually did in Casablanca. The hypothesis being offered here is that fares may have been too high for many who were really poor and too low for a large number of better off citizens; perhaps the largest segments of the public transport market have been held prisoner by the idea of helping the poor through low fares. The poor, on the other hand, may have been paying too much

for the service they received. The experience in Casablanca (see below) appears to confirm this.

5.5 Third, the timing of fare increases has been singularly detrimental, at least in Casablanca and Tunis (the ETUSA fares having stayed largely unchanged over the past decade). Instead of regular, preferably annual, small-step adjustments, in line with cost increases and/or the general inflation, fares have often been left untouched for years at a time. This meant that the fare increases, when they came, were either insufficient (as in Tunis), or brutally high (as in Casablanca). In the latter city, two consecutive increases (in 1980 and 1984) were 40 % and 43%, respectively; the latter "tolled off" some 29 million trips relative to 1983 results (not counting the expected traffic growth at 9.5%) (4). In the recent SNT experience, fares were adjusted in September 1989 after a 30-month hiatus, but others (school and weekly passes) were not touched even then. It is not difficult to imagine the impact of these random blows on the enterprises' finances.

5.6 Turning now to the subsidy aspect, we come to the issue which gave the name to this paper: a gap between social objectives and resources employed. Objectives included such things as extensive bus networks, affordable fares, specially reduced fares for select groups (school and college students, civil servants), free services for some groups and on special days. All of these have been and are still required of the transport enterprises. Unfortunately, the link between the fulfillment of these objectives and the corresponding resources has never been fully established. As reflected in the financial state of our three transport enterprises, funds contributed by the authorities, whether in the form of specific compensation, operating subsidies or capital grants, fell far short of making up for the fare or service constraints imposed.

5.7 The lack of compensation for heavily discounted school passes in Casablanca provides a most drastic illustration of the above problem. The price of the school pass remained unchanged from 1977 to 1986. The school trips represented about 19% of all trips (in 1987), with an estimated 64% discount off regular fares (4). Had the compensation been paid (and none was), the RATC might never have had operating losses. In Tunis, the compensation for school passes has been being paid regularly, but the amount has traditionally been calculated as the difference between the price of a school pass and the next cheapest subscription; in this case this is the annual subscription, imposed on the SNT and used

by only 1.3% of passengers, clearly an inadequate choice (13). This has resulted in a continuous under-compensation, a short-term saving for the state budget, and a persistent loss for the enterprise, increasing the portion covered through short-term borrowing; in the long run, passengers receive poorer services and cost to the budget is higher than it should have been at the time of periodic restructurings. In Algiers, where school transport enjoys high priority and is carried out on a basis of an apparently profitable contract with the ETUSA, what needed to have been compensated is the loss due to low regular fares.

Public objectives and public ownership of transport services

5.8 That the ailing public sector has been allowed for so long to be the monopoly provider of urban transport services in the three cities stemmed from a widely held perception that public ownership of organizations providing these services was conditio sine qua non for achieving public objectives. This view should be seen in the historical perspective: at the time of decolonization in North Africa, a move towards socialism was universal. Moreover, in the area of urban public transport, experience with the then-existing, private (French-owned) enterprises was not positive (decapitalization, reduction of services). As noted above, the three North African countries generally differed in how thoroughly they embraced socialism. In urban transport, however, they all went for a public monopoly, leaving alternative forms of public transport organization (private and mixed-ownership ventures) for too long outside the official agendas. (In Morocco, it should be noted, the private sector survived in intercity transport and tourism, which was to play a vital role in the subsequent reform process).

5.9 Among the modes excluded, or at least repressed, has been the paratransit (a term used here to cover the entire family of modes based on smaller vehicles, usually private, owner-operated, operating with flexible routes and schedules). Taxis were allowed in all three cities, but with a tight limit on entry, permits traditionally given as a boon for loyal conduct in war or politics. No other form of paratransit has been allowed in either Casablanca or Algiers, and violators have been subject to heavy fines (17). Doors were closed to private, minibus-based operations, of the type omnipresent in numerous cities of Asia, South America and Africa. In Tunisia, a variant of a shared-taxi operation, voiture de louage, has been permitted to operate for region-to-urban-center itineraries. Illegal

operations using light vans have also existed, but seem to have been more abundant in the countryside than in cities (6). In addition to many of the would-be drivers and mechanics missing on employment opportunities, the main losers from this policy have been passengers at opposite ends of the income spectrum. The poor were not allowed to organize (in full legality) the inexpensive grass-roots operations for which paratransit is so well suited. The better-to-do, but not wealthy enough to own a car, missed on having custom-tailored, guaranteed-seat services, at higher fares. In either case, a considerable number of travelers could have been attracted away from overloaded bus enterprises.

VI. REFORMS AND REMEDIES

6.1 By the mid-1980s, some links between the problems experienced and their underlying causes were recognised and acted upon or at least proposed in each of the three cities. A summary of these actions and proposals follows.

Casablanca -- the private option, with a metro to follow

6.2 In 1984, faced with a critical shortage of public transport services in Casablanca, and against a background of restructuring the national economy to decrease and rationalize the public sector, the Moroccan Government called for bids from private entrpreneurs to provide urban services complementary to the existing RATC operation (no new routes were allowed). The services were to be first-class (seats only), using 25-seater buses or larger. Bidders were asked to quote fares for their services, a cost index, and a fare adjustment formula based on the index. Already in 1985, four companies started operations with 150 buses, charging fares twice those of the RATC regular services, with fare doubling permitted for night operations. By the beginning of 1988, there were 12 companies committed to operating about 520 buses; the buses actually placed in service may be fewer (430 is been mentioned). Most fleets were between 4 and 8 buses (but the largest had 46) (4). The 10-year service agreements were signed each for a group of RATC routes, mixing high-demand and low-demand service corridors. Any one group could be served by only one private company (and the RATC), but some route overlaps were inevitable. The agreements stipulated an annual concession fee equal to 5% of traffic revenues, requiring the private operators to submit their accounts to the Government for verification. Operators would also be subject to the normal taxation regime. On behalf of the Government, the

agreements were signed by the Wali of Greater Casablanca, a regional super-prefect appointed by the Ministry of Interior. A similar process took place in Rabat one year later; refinements included a better grouping of lines (to minimize the overlap) and the introduction of a flat concession fee of Dh 15,000 ($1,650). In parallel with the deregulation, some palliative measures were adopted for the benefit of the RATC (and the Rabat company): a 43% fare increase in late 1984, another one in 1986, and a promise to approve new loans from the public banking system.

6.3 The rapid pace of the re-introduction of private urban transport operators, after a 20-year absence from Casablanca, was possible because (a) the policy decision had been made at the political top of the country, (b) the skills and resources had been available in the surviving private sector in intercity transport operation, and (c) the public operators, especially the RATC, provided data and technical asistance to their private colleagues. Most of the initial investment came from equity funds or from loans backed up by real estate holdings, the commercial banks apparently having judged the risks to be too high. This attitude changed by the time the bidding in Rabat and the second cycle of bidding in Casablanca took place; the interest rates dropped from 27% to 14% (17). Some entrepreneurs used leasing in combination with borrowing (15). Several new operators brought their equity not from the transport field, but from insurance.

6.4 The impact of private services has been considerable. Passengers, who in 1984-85 were served by 320 buses operated by the RATC, could count on an additional 430 buses (mostly mid-size vehicles) by 1988, with guaranteed seats, no standees (at least not legally) and generally better service (new vehicles, hostesses, music on board). Though traffic data of private operators are not available, the evidence is that traveler response has been enthusiastic. It is generally agreed that the largest crowds disappeared from street stops and terminals. Informal estimates of passengers carried by private operators amount to 60 million annual trips in Casablanca, in addition to about 200 million carried by the RATC . That the passenger response has been good corresponds with the fact that new operators flocked to the market in the second and subsequent years of the experience, and proposals were made to extend the program to other cities.

6.5 It is of particular interest to report on the impact of the liberalization program on the "competition", the RATC.

In 1984, with 320 buses in circulation (19.2 million bus-kilometres), the RATC carried 205.8 million passengers; the patronage dipped to 190.4 million in 1985 (more due to a large fare increase than to the entry of private operators into the market). In 1987, the last year for which the data were available for this paper, the patronage climbed to 200.3 million (320 buses in circulation, 23.1 million bus-km), in spite of the private competition and another fare increase in 1986. This record probably would have been even better had the RATC had the funds to expand its supply beyond the modest 380 active buses. Altogether, the RATC appears to have risen to the challenge, posting its first operating surplus in 10 years in 1987.

6.6 The problems reported in the first two years of operation ranged from congestion at stops and terminals, as the RATC and private drivers carried the competition a bit too far, to reckless driving of the minibus drivers, urged on by generous incentives offered by their employers to maximize the daily kilometrage. The reckless minibus drivers produced some 250 accidents in 1986 and 450 in 1987 (4). In the service dimension, the main complaints have been that private operators routinely disregarded the agreed routes and schedules, waited at terminals to fill up the buses, overserved the profitable routes while shortchanging the passengers on lower-demand routes, etc.. Finally, there has been resistance from the private operators to paying the concession fee (16).

6.7 In parallel with the deregulation of street bus services, the authorities at both the national and city level have steadily pursued the idea for an urban rail-based system in Casablanca. The idea was put forward in 1969 and 1976 transport studies, with arguments based on low capacity and poor services of the RATC. The expected increase in vehicle ownership, likely to further deteriorate the status of buses in street traffic was also a factor. Urban rail found many proponents, Casablanca sharing with other North African metropoles a dream of having a metro. Several feasibility studies later, (SOFRETU propósing a light-rail system in 1984, the Japanese a conventional metro in 1987, and Bouygues another metro in 1989), the subject is still topical but undecided. The price tags were $170 million (in 1983 terms) for the SOFRETU 13-km light-rail line and $300 million (in 1986 terms) for a 15-km Japanese metro, with some probability of fares covering the direct operating costs; the Bouygues estimate has not been published. The investment costs taken alone are not exorbitant until one compares them to $30 million, a rough estimate of the total

resources the Government has spent to help the RATC (including both the subsidies paid and the debt). Nor has it helped that the patronage was forecast at about 200,000 per day and 10,000 trips in the peak hour (though the forecast year was 1990 for SOFRETU and 2005 for the Japanese), very low for a metro and not too impressive for the light-rail. The current peak traffic in the busiest corridor in Casablanca is of the order of 4,500 passengers per hour.

Tunis -- a gradualist and comprehensive approach

6.8 The story of Casablanca suggests a cyclical process in which the potential of private and then public sectors to provide urban transport services is exhausted in successive phases (4). Each phase lasts until a point of crisis, only to be replaced by the other one, also bound to repeat the experience. Tunis, on the other hand has seen a cumulative process of institutional learning in urban transport, quite slow but without violent crises or setbacks.

6.9 In the early 1970s, public transport in Tunis was in a condition resembling that of Casablanca some 10 years later: an aged bus fleet, poor maintenance facilities, an even more aged suburban railway, a downtown with budding congestion, and an undifferentiated road network. Contrary to the Casablanca experience, the Government of Tunisia put together a multi-modal transport project, financed by the World Bank, which approached urban transport from several angles (12). The largest component of the project went to the SNT, with funds to upgrade its bus fleet, the suburban rail system (one of the very few urban rail projects financed by the World Bank), and the depots, and to improve its internal procedures. Instead of roads, the project financed a traffic management component to get the maximum out of the existing urban road infrastructure, including a centrally controlled signal system for about 45 intersections, physical improvements of about 25 at-grade intersections, pedestrian-only streets, and reserved bus lanes. On the institutional side, the project set up a traffic management unit in the Municipality of Tunis, and helped establish a planning agency for the metropolitan area (Le District de Tunis). One of the obligations undertaken by the Government under this project was to maintain the financial health of the SNT through regular fare increases and compensation payments. Not all the objectives of this project were achieved. Reserved bus lanes failed due to poor enforcement, and the District never fully became the integrating force for public and private investments in the

area. By and large, however, successes exceeded failures; the most significant achievement had to do with the SNT bus operations which increased from 136 million in 1973 to 230 million in 1980.

6.10 On the heels of the first project came several overlapping lending operations, whether wholly dedicated to urban transport or with some related content. Some were financed by the World Bank, others by the Arab Fund, or through suppliers credits. The cumulation of these projects in Tunis makes for an impressive list: the city has a functioning traffic control system, complete with planning and maintenance capabilities; a traffic limitation program is in place, featuring a system of cells; a parking management program, so far limited to on-street meters, is advancing; and a major road construction program is creating a system of higher-capacity, limited-access arterials to relieve the centre. Urban transport in Tunis may be one of the most researched in the developing world: the themes which were studied include short-range traffic problems, long-range urban planning, parking management, public transport fare coordination, potential for the private sector participation, the reform of public-sector enterprises, and others.

6.11 In addition to the above, two major initiatives have been underway for some time. The first one is the most visible project in all Tunis: the construction of Métro Légér de Tunis, operated by the SMLT. The roots of the idea are in the early 1970s, when the SNT management (the SNT was responsible for urban rail as well as buses until 1981) concluded that street-based public transport stood no chance against the advancing automobile. The project proceeded against the advice of the World Bank, which judged such a large investment to be premature in light of just-committed investments in the SNT bus operation. A contract with a German-Austrian-Tunisian joint venture was signed in 1981, for about TD 82 ($165) million. A 17-km north-south line is in operation, passing through the downtown. The construction suffered lengthy delays while the destiny of the central section (at-grade location vs. tunnel) was being decided. The 8.7 km northern section was opened in the late 1989. The work is in progress on the west line. According to the best available information, investment costs of the 17-km partial system amount to TD 170 million (in nominal terms). The system is located in a separate, protected, on-street right-of-way (using mostly a counter-flow, lateral placement), and has priority at signalized intersections. The light-rail technology and the street right-of-way were

selected because the forecast patronage was modest (11,000 in the maximum loaded section) and the construction costs of a conventional metro were not affordable. For completeness, it should be noted that the SNCFT has invested in commuter rail operations in the south and west of Tunis, paralleling the existing southern line and the future west line of the Métro Légér.

6.12 The second initiative taking place in Tunis is largely hidden from the public eye. It has to do with a reform of the public-sector transport companies, notably the SNT. The SNT's patronage has been falling since 1981, largely because the fleet investments made in that period were not enough to keep the fleet at its 1981 level, much less expand it. The Government never fully met the obligations taken under the first transport project with the World Bank, and the SNT stayed financially dependent on sporadic fare increases, annual compensation and occasional operating subsidy. Indeed, it was difficult for the Government to be more generous to the SNT while it was also financing a major complementary (competing?) project - the Métro Légér. As noted above, the SNT financed the resulting deficit through short-term borrowing and the build-up of unpaid obligations. The current reform is a second try at "liberating" the SNT, this time within the framework of a performance contract, which would spell the mutual obligations of the enterprise and the Government, covering services, fares, compensation, other subsidies and productivity targets. The "static" financial restructuring of the SNT, a precondition for any other changes, has been approved. The performance contract has been drafted and largely agreed by the Ministry of Transport, but the political consensus has taken more than a year and is not yet fully reached. Various subsidies should require about $70 million over a 3-year period, and the reason for a lack of progress may lie in the magnitude of the price tag. Similar contracts are being prepared for other passenger transport companies, including the Metro Leger. In parallel, the market door has just been opened to let in the first private operator in Tunis. The new private services are limited to seat-only, mid-size buses, as in Morocco.

Algiers -- Hopes pinned on the Metro

6.13 Unlike Casablanca, with its revolutionary return to private operators, and unlike Tunis, with its multi-faceted strategy, Algiers will be mixing something new with something old. The new has to do with the ETUSA. Like the RATC, and to a lesser degree the SNT, the ETUSA has been the

victim of a gap between the wishes (extensive services, very low fares) and the resources the Government actually delivered to maintain the company. The record of capital and operating subsidies paid to the ETUSA was not available for this paper; judging from the fact that the ETUSA's fleet is larger and the debt is lower than those of the RATC, the assistance must have been somewhat more generous in Algiers than in Casablanca. (This may have something to do with fact that the elected local government, rather than a national ministry, has until recently been the guardian of the ETUSA). The ETUSA may have suffered more in connection with the red tape blocking the purchases of vehicles and spare parts than because of unpaid subsidies. The foremost constraint, however, has been and remains the street traffic environment in Algiers. The arterial network is exceptionally sparse, the topography difficult, and buses have been assigned no priority in the traffic stream. This has contributed to a dismissal of an efficient bus-based operation as a viable option even within the enterprise itself; indeed, the ETUSA has been the champion of the idea of an Algiers metro from the outset.

6.14 Unlike Casablanca in 1983-84, Algiers has never had an acute transport crisis. The problem has been chronic, and blunted by organizing special services for school and university students, and for factory workers. (These were integrated with regular transport enterprises as of 1987, where they still get priority treatment (5)). The changes already made in the organization of urban transport in Algiers and the reforms proposed are part and parcel of far-reaching economic and political adjustments taking place in the country, rather than a response to an explosive sectoral problem. The changes made so far include the 1988 liberalization of the market entry of taxis in Algiers, along with a green light to private entrepreneurs to complement services provided by the ETUSA. The former has resulted in a near doubling of taxi permits in one year, with a strong downward pressure on fares. As for the latter innovation, some 50 privately owned and operated mid-size buses provide (as of 1989) seat-only, double-fare services, à la marocaine, formally treated as a shared-taxi operation, since the legislation to permit private operation of urban transport services has yet to be developed. This is of course, just a drop in the bucket, and it remains to be seen how much farther and how quickly the budding deregulation will advance.

6.15 The plan concerning the ETUSA is to transform it progressively from being an extended arm of the local

authorities (its past status) to a public enterprise governed by a holding company in which the Government would only appear as a shareholder. All financing of the ETUSA would ultimately be done on a commercial basis, the subsidies possible only on a quid pro quo basis, within a performance contract. The company itself expects to acquire some 600 new buses over the next few years and upgrade its maintenance facilities. Apart from these general policy lines, which appear sensible, the key practical questions to be resolved include the source of funds to cover the costs of restructuring the enterprise and to pay on a continuous basis the government's part of the future performance contract; the source of buses (given the limited capacity of the domestic supplier); and securing the priority for buses in street traffic, so as to achieve some minimum acceptable commercial speed.

6.16 Something old in the strategy for Algiers refers to the metro. The metro project for Algiers has captured the attention of the authorities and the people much more than any aspect of ETUSA operations. The idea to equip Algiers with a metro dates from pre-independence times, following a well-established approach of the French urban managers. In the 1970s, with Algiers having had a decade of explosive growth, the idea was revived. The hilly terrain, high population densities, a low-capacity road network difficult to expand in a densely built up area, and a plan to develop a system of sub-centers in Algiers metrpolitan area, all spoke in favor of a metro. In the early 1980s, a 58-km metro network was fully conceived, with a priority 11.5 km line planned to start operations in 1987. The largely underground line was expected to carry 22,000 peak hour passengers in the maximum loaded section (220 million trips per year) and involved about AD 5 ($1) billion in capital investments (in 1982 money). The full system was to carry 600 million passengers in the year 2,000, after having invested a total of AD 11.4 ($2.5) billion, also in 1982 terms. This plan advanced to just short of calling for bids, only to be stopped by the deterioration in the country's financial position. A revised plan, completed in the late 1980s, departed from the preceding design in that a substantial portion of the line was to be located above ground, using the existing railway tracks adjacent to the Bay of Algiers. The disbenefits due to locating the line away from dense residential developments were expected to be more than offset by lower capital costs of above-ground construction. This plan hinges on relocating the central railway station to the fringes of the urban area, a move conceived independently of the metro project. The costs for

the 27-km system were estimated at about AD 9.5 ($1.6) billion in 1988 terms; the 3-phase construction, if started this year would be completed in the year 2006. Passenger volumes were forecast to grow as the system became larger, from about 12,000 peak hour passengers in 1996 to about 30,000 upon completion (320 million per year). At that time, the metro would carry about 45% of all public transport trips in Algiers. The detailed design for this project is being developed pending the conclusive decision by the Government.

VII. ISSUES AWAITING RESOLUTION

A perspective on city strategies

7.1 Among the options adopted and those neglected in individual cities are some that could have been expected and others that are quite striking. That the richest of the three (Algiers), constrained by the natural and man-built environment, with the highest degree of car ownership and least road space, would pin its hopes on a metro was to be expected; but that it would not invest in traffic management (and demand management) is disappointing. It is commendable that Morocco, when faced by an insolvent public sector, would opt for deregulation, thus releasing the resource-generating potential of the private sector; that the same country, still under severe budgetary constraints would not let develop a mode requiring no public funds, and uniquely suited for grass-roots operations (paratransit), is not. It is also of concern that Casablanca, with its wide roads and relatively light traffic congestion, would keep coming back to the idea of building an underground urban railway. It is of note that, of the three cities, the two larger ones (Algiers, Casablanca) have repeatedly studied urban rail alternatives, while the smallest (Tunis) actually built one, and right in the middle of some major traffic arteries, at that.

Technical "corrections" and major hurdles

7.2 It follows from the above that there are two "corrections" waiting to be made in some or all cities. The first concerns traffic management, the term used here to include all methods to optimize the use of the available infrastructure. It is completely missing from both Casablanca and Algiers and it should be initiated therein without delay, since the congestion has already been sending wrong signals to the decision makers, and may cause some costly mistakes. The second correction involves the

deregulation of paratransit modes, already discussed above, and long overdue in all three cities (and countries).

7.3 Beyond these steps lie two difficult issues where choices involve the public and the private dimensions. The first of these involves the public-sector and the private transport operators. The former are ailing and need restructuring: only in Tunis can some action be discerned toward resolving their fundamental problems, however slow the progress may seem; in Algiers, things are still at the idea stage, while a negative equilibrium seems to have been reached in Casablanca. The restructuring can be quite costly, and not only in financial terms: the question of what to do with excessive workers may be the most difficult one to answer. It is these large costs, and the related political differences within each country, that are probably keeping the authorities from moving quicker. (The costs of restructuring, unfortunately, tend to increase as the time goes by). As for the private operators, they are there to stay in Casablanca. The remaining questions concern the mode and timing of their expansion into other (regular-class) services and other cities, the methods to ensure proper market functioning, and the supply of services deemed satisfactory by travelers. In Tunis and Algiers, the traditional public-sector orientation and politically strong enterprises may successfully contain the growth of their private competitors, unless a budgetary squeeze threatens the restructuring programs and forces an increase of private sector involvement.

7.4 The second issue will pit the public mode (mass transport) against the private car. However slowly car ownership may grow in North Africa, severe congestion and the accompanying environmental degradation are just around the corner in Tunis and Casablanca, and already present in Algiers. The potential for new road construction in central areas is low or zero; the future will belong to the city which learns to manage and constrain the use of the private car. Of the three, Tunis has a headstart in this area. Neither city (and/or country) has a good car registration system, and the taxation is related to the time of purchase, rather than to the time and/or location of use. Alternatives to a timely introduction of physical and price car restraints in cities would be very costly indeed, both in terms of the remaining street congestion and off-street construction of public transport facilities.

The coherence of the policy and the decision-making process

7.5 In addition to more-or-less technical choices outlined above, there remains a difficult issue concerning the observed gap between community objectives and the corresponding financial and other means available to our three cities. This is really a problem of designing a coherent set of policies and actions. A coherent policy is defined here as one based on understanding of cause and effect relations in some sector of activity. Such a policy would encompass a clear idea of objectives and the available means; it would also require the establishment of rules and processes for setting priorities and resolving conflicts. In organizing the policy making structures, the assignment of powers and responsibilities which take into consideration the distribution of expected costs and benefits. Where these conditions for a ggod policy have been violated, with the most damaging effects in the urban transport sector in North Africa, has been in making policies not consistent with resources.

7.6 The first key dimension of this problem has to do with maintaining consistency in actions. No policy element should be implemented unless corresponding resources are mobilized. At its simplest, this would mean that proper compensation would be due in all major instances where a company, public or private, is asked to depart from its commercially-guided practices. The problem in following this principle is that policy decisions are frequently divorced from the resource decisions, (not to mention those instances when the public imposes its will without any budgeting considerations). This paper dwelled at some length on one example of inconsistent actions, the case of the missing compensation related to school fares. Behind this category of problems can be a mere absence of coordination, which can be treated by establishing inter-agency consultative organisms, or an attempt by a given constituency to benefit from some policy without paying for it.

7.7 While the above involved wishes and resources missing each other in the policy making process, a much more serious problem arises from a failure to match any combination of actions with total resources available to a city, a ministry, or a country. The difficulty here, other than simply not having enough money, is that the existing administrative systems do not permit easy tallying up. This may be a major factor delaying the restructuring of the SNT, a search for a bottom line in some public expenditure

account which would permit a guarantee (or otherwise) for the required funds. Too often, and anywhere in the world, decisions have been made without finding (or even looking for) the bottom line. The major concern about the cited proposals to construct urban rail systems in Casablanca and Algiers, or the actual construction of the Métro Légér in Tunis, independent of the financial and economic viability of these projects, is that the question of affordability (to the city, to the nation) is not being asked at all.

7.7 Several possible lines of action follow from the above. Some have to do with methods to integrate investment planning on city-by-city basis, even if the overall framework is that of a national plan. This is most frequently done on modal and/or sectoral basis. Other possibilities are related to the decentralization of political and economic power and the building up of local government capacity to plan and manage, processes underway in all three North African countries. Elsewhere in the developing world, budgeting on a metropolitan level has been successfully introduced (18). It could indeed be that the evaluation of investments and policies on urban (as opposed to the national) scale is a much effective approach to avoid the wishes-resources gap. Finally, the resource generation concerns must be added to the list of key areas to develop, covering diverse sources (national budget grants, local taxes, user fees, special assessments) and financing techniques. Following a "French model" in urban transport need not be limited to constructing metros. It is of a considerable import that the latter-day renaissance of public transport in French cities followed the introduction of a stable, locally generated transport tax, from the proceeds of which most urban transport investments were financed (19).

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