

Urban Railway Concessions in Argentina: Lessons learned for the different stakeholders

by

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ABSTRACT

The concession of the operation and of the investment program of the suburban railway and the metro of Buenos Aires that was performed at the beginning of the 1990's represented one of the most important efforts of private sector participation in the transport sector in the whole world.

It had deep consequences not only from the point of view of the transportation system itself, but also from other aspects, like the employment, fiscal, economic and social standpoints.

The different stakeholders of the process are identified, including not only the traditional ones but also other important interest groups like the labor unions, the suppliers and the disadvantaged travelers. The consequences over each group are reviewed from the points of view of the "ex ante" decision, of its effects and of its transferability to other environments.

This paper tries to capitalize the experience of both authors that have participated in the process from the private and the public sector standpoints.

BACKGROUND

The Buenos Aires Metropolitan Region (Area Metropolitana de Buenos Aires or AMBA by its acronym in Spanish) that includes the City of Buenos Aires (capital of Argentina), and 24 municipalities of the Province of Buenos Aires, has an area of 3,800 km² a total population of 13 million (one third of the country), and generates about 20 million of motorized trips a day.

Figure 1 presents a map of the AMBA, that has a rich multimodal transport system which includes a suburban railway, a metro and an ubiquitous private operated bus system.

The suburban railway (SR) network has about 840 km (180 electrified) in 7 networks, 260 stations and about 1,400 passenger cars (700 electric) that moves about 1.5 million passengers daily. Half of the SR network has a frequency of at least 3 trains per hour during about 20 hours per day (in the peak hour there is a line with 6 minutes headway), while the other half has a mean headway of about 1 hour and lower quality rolling stock.

The metro (subway or “Subte”) network has 42 km, 69 stations, 600 cars and moves about 1 million passengers a day. The subway company also operates a light rail system (called erroneously “premetro”) of 7.5 km and 12 cars.

The bus system (“autotransporte público de pasajeros” or ATP) has an estimated of 25,000 km of lines with about 15,000 buses operated in more than 200 lines by 100 companies. The system is completed by a number between 40,000 and 50,000 taxis and contracted cars.

The modal split between mass transit and automobile was 85/15 in 1970, while it was estimated in 75/25 in 1990 and around 60/40 in 2005, reflecting the fact that private motorization duplicated in the last thirty years.

The administration of the Buenos Aires transportation system suffered deep transformation throughout time. Figure 2 and 3 presents its institutional evolution.

In particular, Figure 3 presents the evolution of the process since 1991, when, after several intents of improving public management of the SR and of the Subte, the Government of Argentina (GOA) decided to concession them out to the private sector.

This process was part of a global market-oriented structural reform included as part of the Convertibility Plan, an economic program intended to restore credibility and improve efficiency and productivity centered on the adoption of a quasi-currency board which pegged the peso and the dollar designed to put an end to the hyperinflationary process the country was being victim at the end of the 1980 decade.¹

Figure 4 presents the evolution of the Gross Domestic Product (a), the Consumer Price Index (b), the External Debt (c) and the Exchange Rate (d) of Argentina in general between 1983 and 2005.

As it can be seen, towards the end of the 1990's, the Convertibility, which proved to be extremely effective to achieve price stability, ended up in a severe crisis due, in part, to the explosive growth of the external debt originated in the lack of fiscal discipline by the Argentine Government. This crisis, originally derived in a recession and a progressive retraction in

GDP, ended up in a political and social burst leading to the sovereign debt default, to be later renegotiated in mostly favorable conditions.

This paper centers on the analysis of the concession process from its conception and implementation at the beginnings of the 1990's until the 2001-2002 crisis, when with the ending of the Convertibility regime the foundations on which the concessions contracts structure was built on were destroyed.

Figures 5 and 6 present the evolution of the SR and Subte ridership from 1970 to the present. Figure 7 presents the ridership of SR and Subte together with the ATP (bus) ridership. Since this last one is several times superior to the others, the presentation is made in both absolute and relative values taking 1970 as 100 basic points to each one of them.

As it can be observed, the whole Buenos Aires mass transportation system presented a permanent tendency to lose traffic during the two decades previous to the concession.

This process has many reasons, between them is the change in the AMBA urban structure, with employment generator centers such as Belgrano and Flores growing stronger, the increasing motorization level and the constant deterioration of the level of service of the public transport system.

From all three systems, the SR was part of a large net, approximately 35,000 km covering a considerable portion of the most productive areas of the country, on which transport of goods, intercity and suburban passenger services in the AMBA were provided. The state owned company (Ferrocarriles Argentinos -FA) was an important burden on the

budget of the country, with only a less than 5% participation in the freight traffic and a negligible one in the intercity passenger transport.

As it was latter proved by the concession process, the company had an excess of unmotivated employees, was object of frequent strikes and its management was bureaucratic and slow to adjust to the market needs. In the particular case of the SR and Subte, its traffic falled 50% from the historic peak, and the downward tendency continued thanks to an insufficient and poor quality of service, cars and suburban stations overly deteriorated, lacking of public security and almost all the equipment were antiquated.

From the other hand, the lack of control of tickets and fraud contributed to the falling incomes. This effect was experimented even in the case of the SR Roca Line, which had had a massive investment in electrification (700 million dollars) in the 1980's.

Facing such situation, in 1989 the recently appointed administration projected the concession of the freight system and the Buenos Aires SR. In the first case the process was conducted without any financial participation of the GOA, while in the second a fiscal intervention was introduced both in the investment in infrastructure and covering the operating deficit of the system.

The intercity passenger services were virtually discontinued.

THE CONCESSION PROCESS

The concession of Buenos Aires railway system was one the first attempts of railway privatization in the 90's, with not many international antecedents to inspire on.

In 1994 -1995, the SR and the Subte systems were split into seven concessions according to the technical characteristics of each network and with the basic concept of keeping the vertical integration en each company of the operation and maintenance of both infrastructure and rolling stock.²

The groups that included only SR lines were given in concession for a period of ten years, while the Subte (at the time a 35 km net) and the Urquiza SR line, were concessioned for a period of 20 years with the idea of allowing investments of a bigger magnitude.

In the framework of an international bidding process, each concession was awarded to the bidder that asked for the lowest net present value of a combination of operating subsidy (or operating fee) and payments for the investments over the term of the concession.

Five of the seven concessions offered to transform the required subsidy in an operating fee payment at some point in time of the concession period.

The GOA specified a minimum service an investment plan and a fare structure for each line.

The minimum service was fixed according to the potential of each line rolling stock.

The investment plan was established with the idea of funding a rehabilitation program for the SR and a modernization one for the Subte, that includes both infrastructure and the partial renovation of rolling stock. The total amount of investment was estimated in 800 million dollars for the SR (except the Urquiza line) and in 400 millions for the Subte – Urquiza concession.

In the case of the SR almost all the new investment was programmed in rehabilitation or renewal, without considering any new electrifications or major rolling stock incorporation. By other hand, the investment plan for the Subte was based in a Master Plan (“Plan Maestro de Infraestructura”), which was prepared by Subterráneos de Buenos Aires (SBASE) in 1991 that included the complete change of the signaling and traction systems in some lines, the built of a new maintenance facility, a Central Operations Command (Puesto Central de Operaciones) and 80 new cars.³

After an international competitive process, the SR and Subte system was operated by four companies: Trenes de Buenos Aires, Metropolitano, Metrovías and Ferrovías (see Table 1).

One of the most important components of the investment plan was the elimination of about 30 grade crossings in the City of Buenos Aires. Even when it had a crucial importance for the system and for the community, this project never was started because of the opposition from the neighbors and business owners dwelling close to the grade crossings. Between 1997 and 2000, the City of Buenos Aires extended the subway Line D to Belgrano, building four new stations. Furthermore, in 2003, the

City of de Buenos Aires inaugurated two new stations in Line B which were not part of the original concession contract.

TAKE OVER, FIRST RESULTS AND RENEGOTIATION

During the first years all the concessions were a complete success. In almost all the cases ridership growth dramatically during the first months of service, partially recovering former passengers that were derived to the bus because the service deterioration, and partially because of the strict ticketing control, showing that a big part of the problem of the system was due to the lack of management and/or the strong restrictions that the managers faced during the public administration.

This growth was also allowed by the very low tariff level that was set in the moment of the concession and that had little change during the first five years. In fact, the SR had a minimum tariff of about 0.30 US dollars for a 12 km trip. In the Subte it was set to a flat 0.45 US dollars for an average ride not longer than 5 km.

Towards 1997 the process was becoming highly successful from both the transport and financial standpoints, showing that the demand was very sensitive to the service quality. Facing the fact that fares were extremely low by any point of view, the GOA and the companies started to think that it was possible to increment it in the order of 100% without losing ridership to generate a fund of about 250 million US dollars per year to provide for the financing of the modernization of the system.

The implementation of these ideas required the renegotiation of the contracts and its extension to 30 years, which took place from 1997 to 1999.

Nevertheless, due to the fiscal crisis, by 1998 the GOA started delaying the payment of its financial compromises with the concessionaires, the works were stopped and maintenance, cleaning and security related services started decreasing. Tariffs increases that were supposed to be destined to the modernization of the system were applied by the GOA to cancel its previous debts to the concessionaires.

Finally, the 2002 crisis produced a massive collapse of both quality and quantity of the service, all of which ended up reflecting in an important fall of ridership making impossible for new tariffs raises and any modernization plan to become effective.

BASIC RESULTS

A study performed by the World Bank evaluated the impact of the rail based concessions in Buenos Aires from the user, community and fiscal standpoints and compared the situations “with” and “without” concession up to 2001 (Rebelo, 2006).

The study concludes that from the standpoint of the users, the savings in their generalized cost including savings in tariff and travel time, reached 2,900 millions of Arg\$ of 1997 (1,600 millions discounted at 12% rate). From the standpoint of the community, the overall travel time savings for the community and the savings in operating costs was of about the same

order than the obtained for the users. This could be doubled if the GOA would promote a rationalization of the bus system.

Finally, from the fiscal standpoint, the savings in operating subsidies to the system with some assumptions reached 1,600 millions of Arg\$ of 1997 (900 millions discounted at 12% rate).

In addition, there was an increase in investment in infrastructure and equipment higher than what could be expected if the system would remain under the public administration.

Unfortunately, the study could not provide estimates of costs of externalities and accident reductions because of lack of data.

After 2001, with the change in the country's macroeconomic conditions that retracted the demand and the delays in payment of operating subsidies and investments that deteriorate the financial situation of the companies, the quality of service deteriorates and the ridership decreased.

In this particular case the main stakeholders are:

- The existing and derived passengers.
- The workers.
- The shareholders.
- The community and tax-payers in general.

The effects of the process on each of these groups are commented below.

Even when according to Rebelo the overall results of the process can be considered basically a success for the country, it may be true that certain sectors of society may have been affected negatively by some aspects concerning the concession process.

EXISTING AND DERIVED PASSENGERS

As can be seen in Figure 5, passenger ridership in the SR raised from about 210 millions in 1993, to 480 millions in 1999. This was probably achieved because all level-of-service indicators including punctuality, cancellation of trains, seating capacity, frequency, reliability and safety improved dramatically, reaching similar levels to the US suburban railways.

Between 1993 and 1999 the SR experienced an important reduction in travel time and a dramatic improvement in security and reliability of the services. This was due to the improvement in train supply, that went from 95 million car-kms in 1993 to about 170 million car-kms in 1999 (a 78% increase) with the corresponding increase in frequency. Between 1993 and 1997 the number of cancellations and delays fell about 85% reaching punctualities superiors to 95% in most services.

The Subte had a similar traffic evolution (Figure 6) going from 145 million trips in 1993 to 260 million in 1999 (almost 80 % growth). The supply increased from 19 million car-kms in 1993 to 36 million in 1999 (a 90% increase).

These improvements where possible because of the improvement of availability and utilization rates of the equipment received at the start of the concession.

In both systems the occupation rates were at their lowest in 2001 but afterwards they have recovered beyond the crisis due to the policy of keeping reduced the supply even when the demand has increased. This

was authorized by the declaration of the “railway emergency” by the GOA in the framework of the general economic emergency of the country.

After 1999, as a result of delays in payments of subsidies, some concessions reduced outsourced services such as security personnel which are key to control fare evasion. In the same way that regarding the recovering at the beginning of the concession, this suggests that the actual reduction in overall traffic was probably not as severe as official numbers for paid traffic suggest.

The contracts had a sophisticated mechanism of tariff adjustment that allows the companies to charge small fare increments if they generated improvements in their level of service. Since fare levels was above marginal costs and below the bus fare, the system was well designed with an important incentive for the concessionaires. Until 1999 the tariffs were those set in the original 1991 contracts, with the adjustments allowed to recognize a tariff bonus when the concessionaire would meet some performance targets preset in the contract. After the renegotiation of the contracts there was two tariff adjustments of 15% each in 1999 and 2001 oriented to provide a fund to finance new investments.

Facing a deep social crisis, in 2002 the GOA decided that all the transportation system (SR, Subte and ATP) tariffs would remain unchanged, freezing the SR tariffs in about a half of the bus ones. This policy reduced the incentives to expand the supply and requires an increasing amount of additional subsidies, specially to afford the cost increasings.

After a sharp deterioration in service and ridership, in 2004 the GOA rescued the contract with Metropolitano for the San Martín and signed a management contract with the three other concessionaires, indicating that it would be a call for a new bid for this concession, which did not happen up to the end of 2006.

WORKERS

A distinction has to be made between workers that quitted or were fired by the concessions, the former Ferrocarriles Argentinos (FA) personnel incorporated to the concessions and those workers incorporated from the labor market.

In general personnel structures inside the concessionaires were based on keeping the technical workers and recruiting new workers from outside the companies for administrative and management positions and ticket selling, which had a crucial importance in the fare control.

In 1999 there were 7,400 employees in the SR and 2,000 in the Subte Urquiza system.

Even when this represented a dramatic decrease with respect to the situation with the public administration, this numbers do not show the important number of outsourcing employees, specially for security, cleaning and rolling stock and facilities maintenance.

Workers voluntarily leaving the system were compensated with a retirement program funded by the World Bank that make possible to allow to set up a new business or to seek for a new job.

Nonetheless, personnel voluntarily entering the retirement program, administrative staff in particular, had in general an elevated age and along with highly out of date skills it made really difficult to successfully return to the labor market or set up highly productive entrepreneurship activities. Thus, a large part of this money was used to enlarge taxi fleets and other inefficient commercial activities that turned out to have a very short life. In general, the railroad personnel relocation process can be considered a failure, due to its simplistic and shortsighted conception. A different outcome could have been obtained if the retirement program should have been joined by a training program enabling the leaving personnel to successfully join the labor market or at least preparing them to run small business.

Unions suffered the impact of a diminishing number of workers as a direct result of the working force reduction, although in many cases their leaders grew stronger thanks to different agreements with the concessionaires.

By 2004 there is an increase in labor conflicts with claims for better labor conditions, the incorporation of more people from the outsourced companies to the regular staff, and in the case of the Subte a substantial increase in staff due to the change of the number of working hours per day from 8 to 6.

SHAREHOLDERS

The terms of the concession process involved serious risks to the bidders, mostly related to the need that each one of them conducted their own traffic estimates (without any sort of warrant from the Government) and

that the bidders had to quote a lump sum for a number of investments in many cases poorly defined in the bid documents.

Such serious risks narrowed the bidders to groups already appertaining to the transport activity in the AMBA (bus shareholders), with very little risk aversion and a huge experience influencing the decision process of both technical and political staffs of the transport authority.

The attraction of these groups neutralized their natural opposition to the concession process. Nevertheless, even when no monopolic positions were established, the fact that the bus shareholders finally controlled several SR lines was politically attacked. The crisis in the bus sector also had deep impact in the concessionaires conduction and finances.

An important thing to take into consideration is the fact that bus sector entrepreneurs in almost every part of the developing world and in Buenos Aires in particular, come from family ran business which structure is not exactly the most efficient to the railroad administration that requires extremely complex and highly professional organizations, as it was detected by Alfred Chandler almost a century ago.

The bus sector administration scheme in Buenos Aires is based upon the handling of an extremely short term cashflow and an extremely strict control of inputs, maintenance and drivers, with very basic professional schemes and highly adapted to the model of associates - vehicle owners company, clearly not adaptable to the railroad industry.

Trenes de Buenos Aires, controlled by a group of bus owners, was the first concessionaire to present financial difficulties. In the case of Metropolitano, a company that was given the concession of three of the

suburban railways, 50% of the shareholding was owned by a group of bus sector entrepreneurs pushed out by the crisis selling its share to another group which has led the concession to a critical point.

At the concession process also took part groups coming from both the railway and construction industries, which although brought a certain amount of management skills, they made the concessions less independent during the selection of suppliers and contractors.

The contracting of other companies belonging to the same shareholders affected the concessionaries profits, encouraging technological decisions that were extremely questionable. A clear example is provided by the case of TBA controlling partner, also owner of a former railroad factory which led it to develop a car with an important electronic component that originated lots of difficulties to the service.

In the case of public service companies, as a consequence of its high level of public exposure it is a common practice to try to moderate the levels of profit that are presented in their balance sheets. In our particular case this can be done performing the hiring of related or controlled companies. The paradigmatic case have been the security and cleaning companies, based on poorly qualified workforce and with extremely simple organizational requirements. These schemes reduce concessions profits by actually transferring them to the same shareholders through these companies.

The bidding process demanded an international experienced operator with the industry know-how, responsible before the GOA. Although in the beginning such scheme enabled the introduction of state-of-the-art operation, maintenance and management practices, the lack of precision

in the role the operator was supposed to play, and since generally it represented an important cost to the company, the domestic partners tended to do without them as soon as they could by negotiating with the GOA. Despite this fact, the management of the companies gained on operating experience, and even if they weren't always capable of avoid bad choices, they carry on a significant job.

SUPPLIERS

Shortly before 1960 Argentina developed a railway industry that aspired to replace all the necessities of FA and SBASE. There were several plants for the manufacture of wagons, passengers cars and diesel-electrical locomotives supported by the local electromechanical industry for the manufacture of all type of components. In the cases of the manufacturing of locomotives and of electrical cars they imported the more advanced equipment. There existed several companies dedicated to track reconstruction and renovation, and about half a dozen of them were equipped in the 1970`s to perform mechanized works and maintenance. The national state owned company even produced rails.

This industry was in the end over dimensioned for the permanent needs of the country. Once renewed the old fleet of wooden railway cars FA placed very few purchase orders that where not enough to maintain the continuity of the industry. On the other hand, apart of very small sales to the bordering countries, the industry never export in a large scale (except for a gigantic export of 400 vehicles to Cuba, financed by the GOA).

By the end of the 1980's the argentinian rolling stock industry was devoted only to the reconstruction or the overhaul of the equipment that FA and SBASE left inactive or cannibalized, failing to take advantage of the capacity of their own shops. At the beginning of the 1990's some of these companies closed their doors since the local market was insufficient to maintain to the railway industry in the long term. On the other hand, facing a shortage in the contracts, many of these companies of track renovation closed their doors.

With the concessions some of these factories ended up into the hands of the concessionaires, by having them acquired or on the contrary, by having the shareholders of the establishments entered in some of the concessions. Even when this was not a negative fact in itself, in some cases it derived in a situation in which some concessionaires focused their plans of modernization and maintenance on the aim to employ those industrial plants.

DISADVANTAGED PEOPLE

The necessities of mobility of handicapped people, specially of the people with walking difficulties, had not been a concern in Argentina until well entered the 1980's.

The concession process was coincident in time with this awakening of the public conscience in those aspects and the appearance of nongovernmental organizations that began to exert pressure on the new private companies. In some cases there were some advances, like for example with the electric cars in which the rolling stock and the platforms

were already at the same level, and where the construction of ramps was a solution easy to make. There was no advance at all in the diesel hauled lines where the platforms are at different level than the vehicle floor, not allowing the passage of a wheelchair.

In the Subte there was a small advance with the installation of elevators in all new stations built by SBASE and in two stations of the old network. But except for the few trips that can take advantage of these facilities, the Subte continues being inaccessible for handicapped.

COMMUNITY, TAXPAYERS AND INSTITUTIONS

As it was said, the contracts had highly sophisticated tariff adjustment mechanisms based on quality of service improvements achieved by the concessionaires. Although, by the time of its application, the 1999 presidential campaign was being held, and both opposition and the media presented the tariff adjustments (generally smaller than 10%) without any mention to its fairly low levels with regard to the general prices. Another common problem with the media was the confusion between operating subsidy and the repayment of investments, presenting both flows as a subsidy for the companies.

As Rebelo pointed out, the economy as a whole also had the benefit of operating cost savings due to a lower operating cost of the rail/subway system as compared to bus for those who shifted from bus to rail. These benefits could be multiplied if the GOA would put in place a bus route network rationalization program to adjust for the demand that shifted to the SR.

Table 2 presents an estimate to the cost of traveling for the SR system at different years, including the operating subsidies and the average fare. As it can be seen, these numbers turn out to be substantially smaller than the ones previous to the concession (1986). Such figures were estimated in nominal dollars, which introduces distortions created by the different power of purchase of the US dollar against the Argentinean peso throughout time, yet differences are of such a magnitude that the analysis still allows to visualize the success of the process from this point of view. Up to 2001 the operating subsidies were constantly decreasing according to the commitments stated in the proposals and in the contracts. In particular, three concessions start paying a concession fee at the end of the 1990's that was applied towards the investment plan.

The fiscal crisis did not allow the GOA to continuous paying in term its commitments making fall the whole concession system.

Even when it is a fact that some concessionaries had promised to pay fees that hardly could have been met given their cash flows, the economical and political crises accelerated the crash since these problems could have been managed with a solid government.

Real estate

Another important issue was the administration of the railroad real estate property. The GOA kept for itself the exploitation of the railroad property that wasn't strictly needed to operate the system, transferring to the concessionaires only the spaces of land technically required.

With that purpose an office exclusively dedicated to the exploitation of the land was created, based on the ideas provided by an American consulting

firm that hold that the GOA could have higher incomes by exploiting those lands thru companies created with that only purpose.

Unfortunately, such concept had no positive effect and for example, while the railway improved, the big terminals of Buenos Aires were not changing. Towards 1999 it was allowed to the concessionaires to participate in the exploitation of the terminals, generating in most cases important buildings improvements that could have provided interesting results should the crisis not happened.

From the other hand, the management of the lands independently from the transport activity generated a series of projects strategically inconvenient to the transport system, threatening permanently the right of ways by political and real estate interests

Besides, it can be sustained that by limiting the amount of land given to the concessionaires, the companies were deprived from a source of income that could have diminished the need for a subsidy and contributed to improve its finances.

Control of the concessions

An important aspect of the whole process of concession was its evident institutional weakness and the lack of attention paid to the development of competent human resources in the sphere of the public administration.

In 1997 a regulatory organism was created in order to exert control and oversight the automotive and railway mass transport, but it was created thru a presidential decree instead of being voted by the Congress, which creates a normative weakness from the moment of birth. Despite of its name (National Commission of Transport Regulation in Spanish “Comisión

Nacional de Regulación del Transporte” - CNRT) it had been conceived to control and oversight, leaving the regulatory action to the Transport Secretary.

The opportunity to build a control office strong and independent from the political authorities was lost, and the merging of both the automotive and railway mass transport control did not produce coordination, but only go against specialization.

Changes in the direction of the CNRT were very frequent with seven presidents in seven years. Progressively, the CNRT had an each time less technical administration, making it more and more vulnerable to pressures by a political system highly permeable to the sectorial interests.

A process with the characteristics of the one that took place in Argentina had necessarily to be accompanied by a significant effort on developing the human resources for the supervision and the control of the concession contracts. Unfortunately, nor the politicians in charge nor the World Bank gave enough attention to that problem, which ended up with the control office basically in hands of former railway managers not committed with the concession process or inexperienced professionals with little chance to be adequately trained. This has definitely proven to be one of the main problems of the process.

Strategic planning

Planning was a little more than a formalism in FA and in SBASE.

In effect, the attempts of creating technical, stable and competent organizations, capable of translating the government policies into realistic plans and to evaluate the programs of investment were diluted by the

disinterest of the successive political conductions, as happened with the “Estudio Preliminar del Transporte en la Región Metropolitana” (EPTRM, 1973), when they were not deliberately sabotaged, as in the case of installing in FA the practice of Cost Benefit Analysis.

Nevertheless, it existed in FA an organic structure and human resources to do that, while in SBASE it was not implemented up to 1990. With the concessions the GOA had to finance a set of projects that both companies had " in folder ", which were selected by the technical staff in charge of the privatizing process. These projects portfolios did not contain major mistakes because or they were including projects of renovation long time deferred or, in case of the Subway, they were implying inevitable modernizations of equipment and rolling stock.

With the concessions the formal structures in the administration simply disappeared and the planning task moved to the concessionary companies. The majority of the concessionaries limited itself to a function of short term planning in general without any contact with the rest of the transportation system and / or other concessionaries. Nevertheless, when in 1997/99 the contracts were renegotiated, the duration of them was extended to 30 years over the basis of ambitious modernization projects that added up several billions of US dollars. But these projects did not arise from the Administration, but from each company, without any sound and stable technical structure in the public sector to generate new proposals and with a limited capacity to analyze the proposal of the concessionaries.

After the crisis the situation was even worst, because the GOA dissolved the technical groups and not replaced with others of equivalent level.

LESSONS LEARNED

The design of the process

The whole design of the concession process was based in the idea of transferring to the companies the whole package of operating costs, operating revenues (at a fixed fare), a preset package of investment and a cash flow of operating subsidies and payments for the works.

This would provide an incentive to the concessionaire to be cost efficient in the operation and in the execution of the investment plan.

Nevertheless this idea proved to have certain shortcomings:

- The risks associated with traffic and costs estimates made the bidding process attractive only for a small group of companies, generally linked with the bus or the construction sectors that was used to lobby into the Administration to improve their position.
- Even with this type of incentives, the system required a technically strong and independent regulatory office, which could not been put in place.
- In many cases the type of organization of the shareholders did not have the strong professional culture which is required for the management and administration of the railway business.
- The possibility of managing big cash flows created some sort of confusion between liquidity and economic results that also stimulated

the development of projects that have not always been positive for the service.

- Even when the SR is of great use for the low income part of the population, it does not mean that initial tariffs should be extremely low, since subsidies, in that case, end up being larger than what is socially needed. The experience of Buenos Aires shows that to rise tariffs is always extremely difficult because of political reasons, even if the service shows signs of serious improvement.
- The authority must control or limit the contracting of companies participated by the controlling partners of the concession.
- In the case it is needed, the roll of the international operator must be specified clearly in the contract.
- An alternative scheme in which the Government only contracts the operation, and eventually the works, for fixed prices, keeping the managing of the ticketing system and fixing the fares (like Amtrak does in many American cities and what is developed for many BRTs systems) would have had the difficult to not providing an incentive for the control of the fare evasion but probably could guarantee a more service oriented management of the companies.

The development of the process

The concession system did not have any “safety net” that could provide for the possibility that the Government would not pay on time its obligations.

As Rebelo pointed out, “since macroeconomic shocks occur more often than desirable, the lesson is that a concession with operating subsidy needs to be supported by a guarantee (from a third party) which would be

triggered when the State defaults on its obligations”. Rebelo also suggests the possibility of contracting a combination of a multilateral Bank loan to finance the State investment obligations in the concession contract and a guarantee for payment of operating subsidies.

To ensure user affordability during the crisis and to satisfy labor pressures, the GOA increased and/or restored strong operating subsidies that it is estimated that are required to cover about a half of the operating costs in 2006. In practice it represents the “de facto” implementation of a scheme similar to what we are suggesting with low incentives for the concessionaires to provide for the increase in ridership, in the fare control and in the quality of service.

After the emergency of the crisis it would be better to explore the possibility of developing some kind of demand oriented subsidy that could target specifically the low income groups and allow some tariff increases. It is important to point out that this policy erodes the public image of the concession process since it provides for an always increasing subsidy with very low fares and a deteriorated quality and quantity of service impossible to supervise adequately by the government office.

The institutional framework

It is not possible to provide to the sustainability of any private participation process in a public service business without providing a strong institutional framework that can protect the interests of the Government and the users giving at the same time a stable framework of rules for the companies.

In this aspect the Buenos Aires SR and Subte concessions can be considered a failure, since it was not provided for the developing of human

resources nor the developing of an institutional framework capable to deal with the contract administration.

Beyond the SR and Subte concessions institutions, the lack of a coordination agency representing the different government structures, did not allow to provide for a rationalization of the bus network that could help to diminish mobility costs in the Metropolitan Area.

Furthermore, regarding the transport and land use coordination, as Rebelo pointed out, “little was done to take advantage of land use changes to promote investments which could finance the transport system as a whole”.

Labor force

Avoiding overstaffing is obviously one of the main capabilities of any private participation process. Nevertheless, in the case of Buenos Aires, there are two main lessons to learn regarding this issue.

First, the process of reducing the staff cannot be limited to the payment of a compensation to the employees, but being supported by an outplacement process that can help the workers to get the best from their money, starting a new business or getting the best possible job opportunity.

Second, the introduction of subsidies after 2002 to compensate labor demands and any direct or indirect pressure to increase the staff of the concessionaire erode the control that the company has over its staff recreating the interference in management and political pressures which most public agencies suffer from their governments.

The future of the Buenos Aires concessions

Even when the Buenos Aires SR and Subte concessions were a remarkable pioneer effort that achieved their main goals of improving quality and quantity of service and decreasing public subsidies, they are at the present time in a decision point that requires for a whole definition of the contracts to provide for a stable legal framework.

Some of the points that should be developed in this legal framework are:

- To clarify the situation of the different concessionaires in terms of their commitment to the contracts, canceling the concessions with strong defaults.
- To re elaborate the basic philosophy of the contracts supporting the original scheme of incentives, or consolidating the present tendency to provide a fee for the management and operation of the system (BRT scheme).
- If the decision is to go to the original scheme, it is advisable to extend the concession periods to allow the maturation of new investments with private funding and to avoid frequent renegotiations and uncertainty of the concession.
- To develop a technically solid and independent regulatory organism with the corresponding training programs.
- Even if it could be obvious, strategic planning should remain as a function specific of the Administration that must orient the development of the transportation system protecting the general interest of the community. In weak institutional environments the existence of strong private public service companies must be compensated with strong

technical staffs in the Administration capable of provide for the guidelines of the development of the process.

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TABLES

Table 1. AMBA Suburban Railways (SR) and Subway (Subte) Concessions

Concessionaire	Line	Take over	Term (years)
Metrovías	Urquiza + Subte	01/01/1994	20
Ferrovías	Belgrano Norte	04/01/1994	10
Metropolitano	San Martín	04/01/1994	10
Metropolitano	Belgrano Sur	05/01/1994	10
Metropolitano	Roca	01/01/1995	10
Trenes de Buenos Aires	Mitre + Sarmiento	05/27/1995	10

Source: Rebelo, 2006.

Table 2. Total cost of the Suburban Railways (SR) Concessions

	1986	1996	2003	2005
Operating Subsidy (millions of US dollars)	335 ^(a)	109 ^(b)	48,2 ^(d)	126 ^(e)
Passengers (millions)	346 ^(c)	414 ^(d)	376 ^(d)	413 ^(d)
Subsidy per passenger (US dollars)	0,97	0,26	0,13	0,31
Mean fare (US dollars)	0,53	0,50	0,23 ^(d)	0,22
<i>Total cost per passenger = Fare + Subsidy (US dollars)</i>	1,50	0,76	0,36	0,52

Sources:

^(a) Accounting information Ferrocarriles Argentinos.

^(b) National Commission of Transport Regulation (CNRT), including all the subsidy of the Subte – Urquiza system.

^(c) Ferrocarriles Argentinos.

^(d) CNRT.

^(e) Our own estimation from several sources.

FOOTNOTES

1

The Convertibility Law was approved by Congress on March 27, 1991, establishing full convertibility of the austral at A10,000 per U.S. dollar (or the new peso created in January 1992 at Arg\$1 per U.S. dollar), requiring the Central Bank in principle to back fully the monetary base with foreign exchange reserves, and prohibiting indexation of local currency denominated contracts. Unlike a “classical” currency board, however, the Central Bank was allowed to hold U.S. dollar-denominated domestic debt as a cover for part of the monetary base, and was also not required to intervene to support the dollar (i.e., the peso technically could appreciate above parity). From “The IMF and Argentina, 1991-2001, Evaluation Report”, page 11.

2

The Mitre and Sarmiento lines by one side and the Subte and Urquiza Railway line by the other have the same gauge and electric systems and was grouped to take advantages of the scale. This proved to be an excellent decision since the moment that for example the usage of the Urquiza trains in the Subway contributed at the beginning of the concession to put some relief in the crisis of rolling stock of the B Line.

3

One of the authors was at the time working as Technical Manager of Subterraneos de Buenos Aires, in charge of the design of the investment plan of the concession.

CAPTIONS TO ILLUSTRATIONS

Figure 1. AMBA Region Map with its Suburban Railroad and Subte nets

Figure 2. Institutional evolution of the Buenos Aires Transportation System (up to 1990)

Figure 3. Institutional evolution of the Buenos Aires Transportation System (1990-2005)

Figure 4. Evolution of the Gross Domestic Product (a), the Consumer Price Index (b), the External Debt (c) and the Exchange Rate (d) of Argentina in general between 1983 and 2005

Figure 5. Buenos Aires Railway System Ridership Evolution 1970-2006

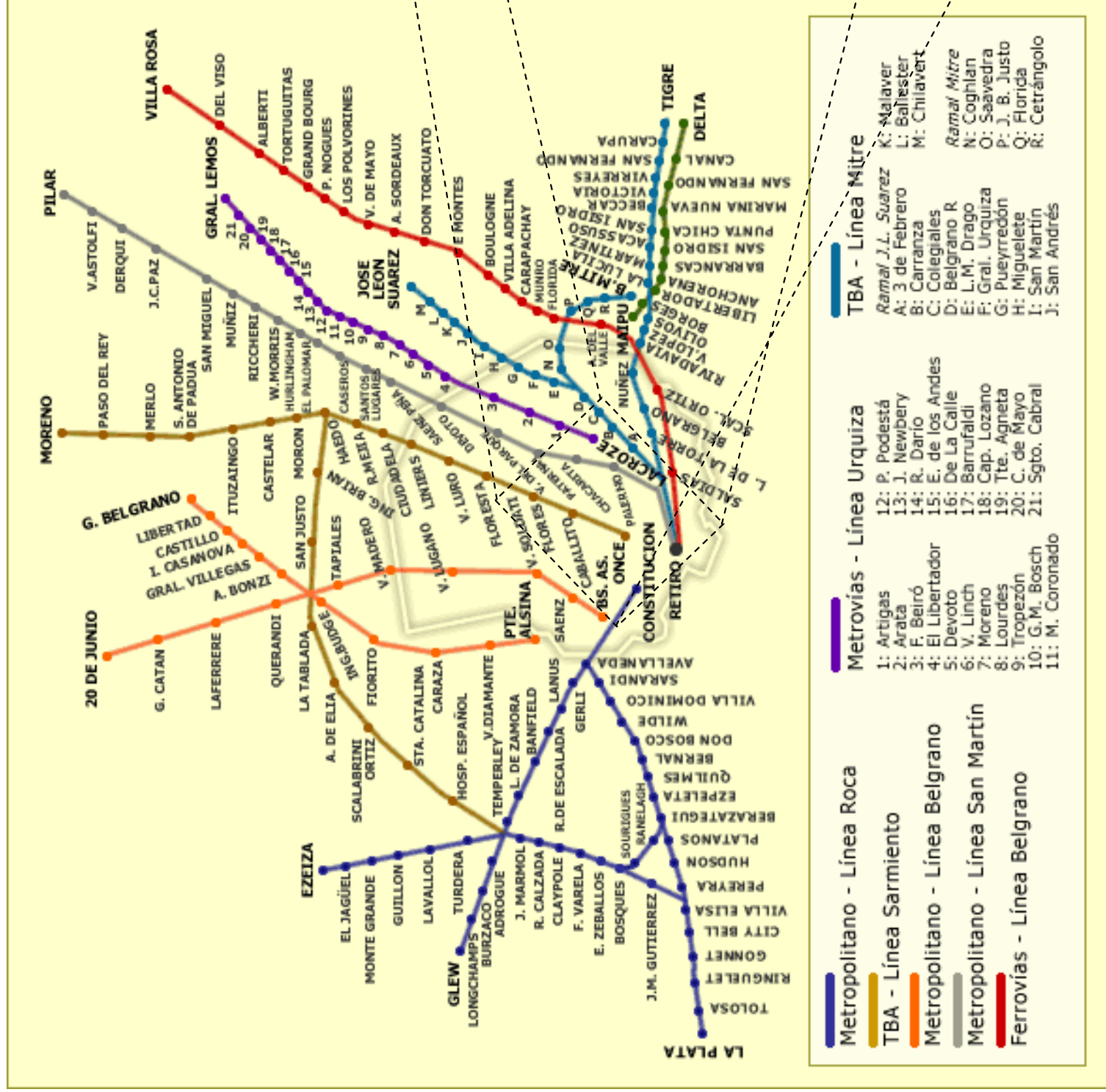
Figure 6. Buenos Aires Subway System Ridership Evolution 1970-2006

Figure 7. Buenos Aires Transit System Absolute and Comparative Ridership Evolution (1970-2006)

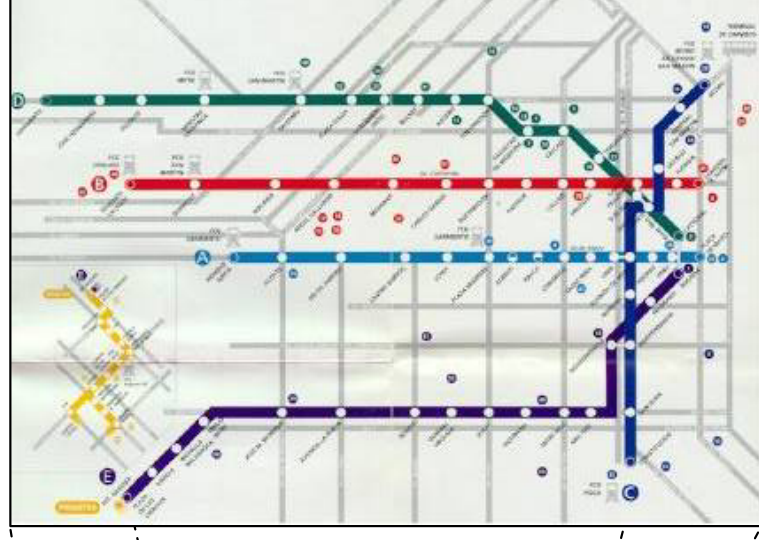
Figure 8. Buenos Aires Transit System Fares Evolution since 1990 in current and Dec-03 \$Arg

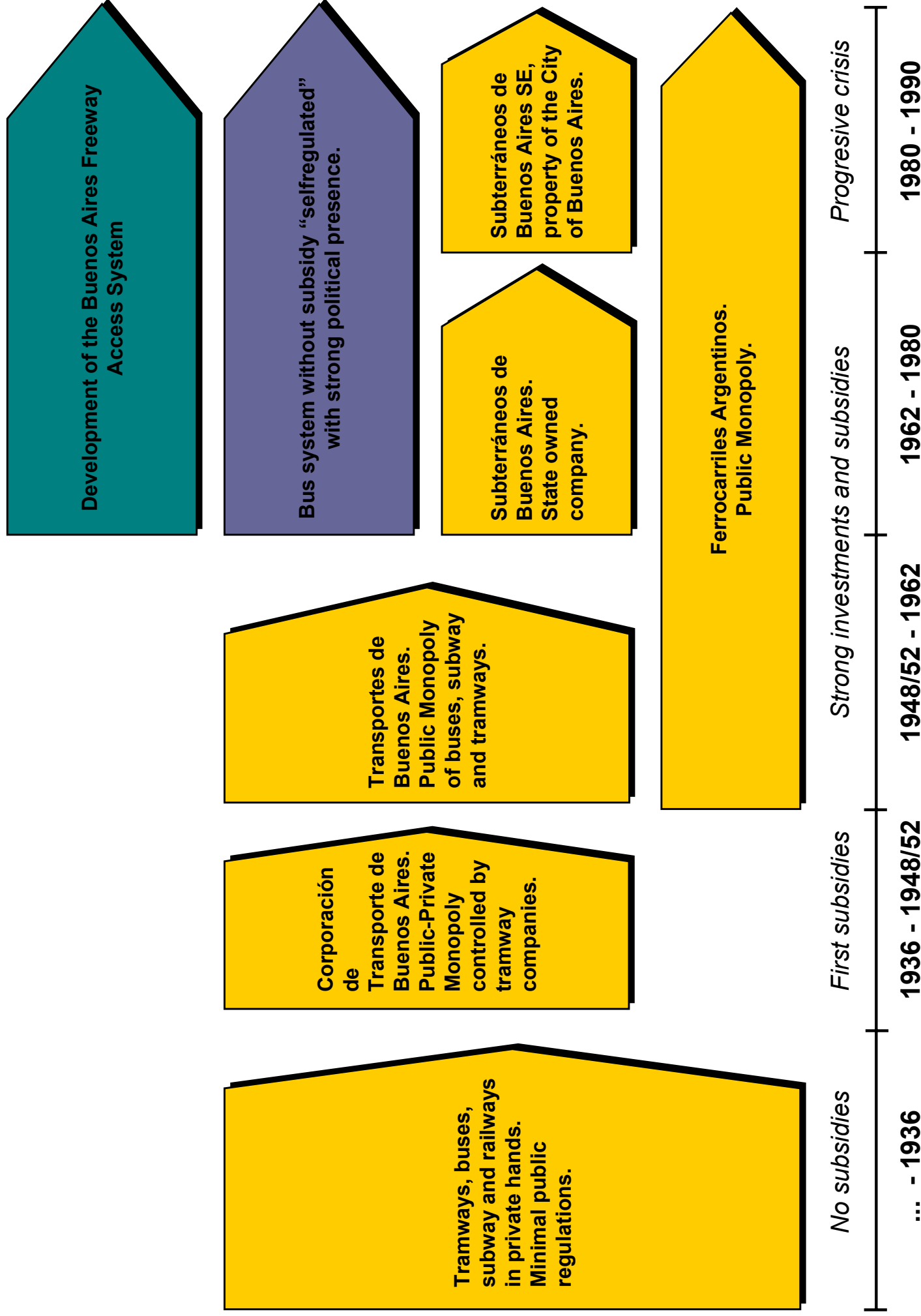
ILLUSTRATIONS

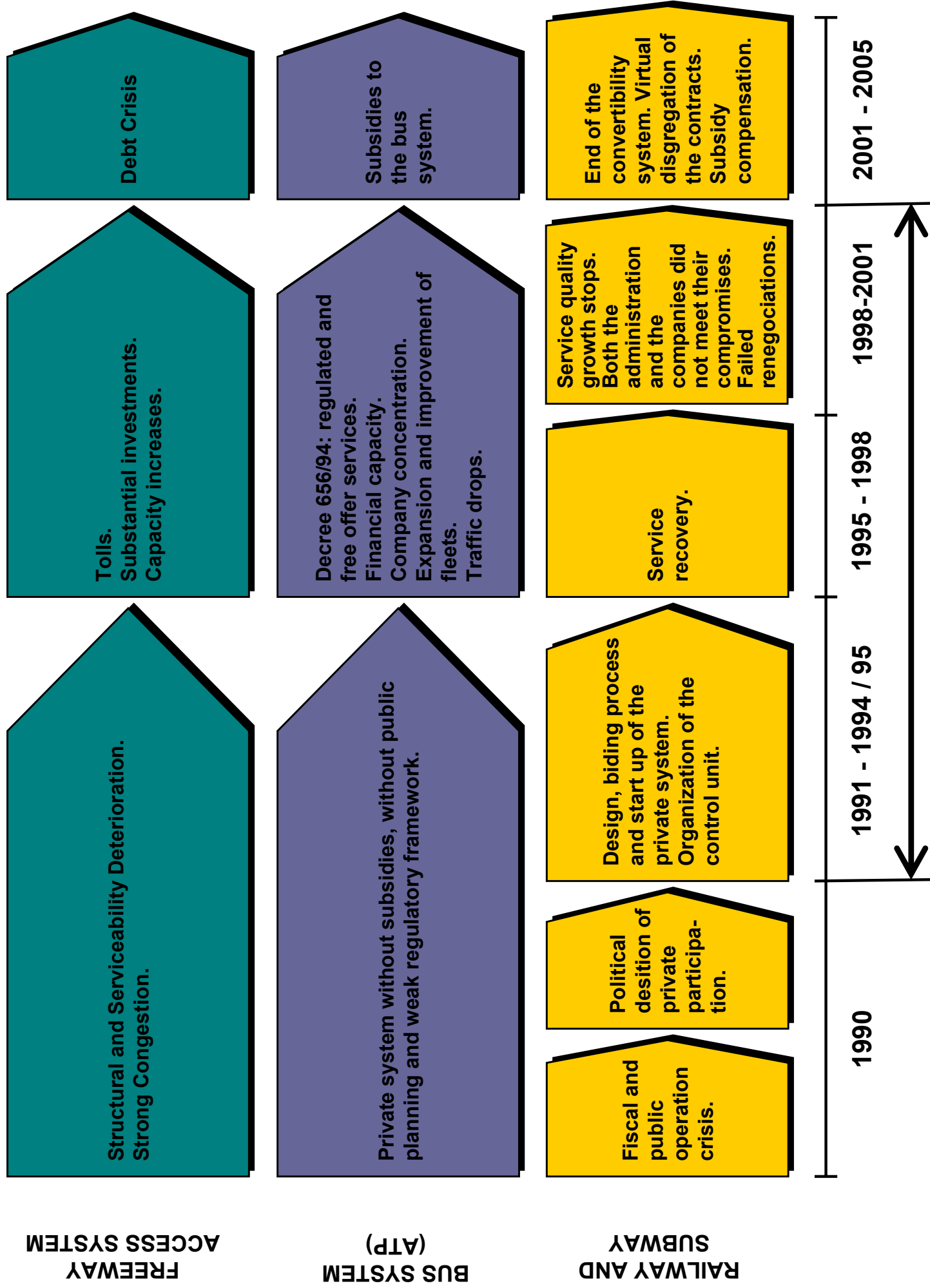
Suburban Railroad net



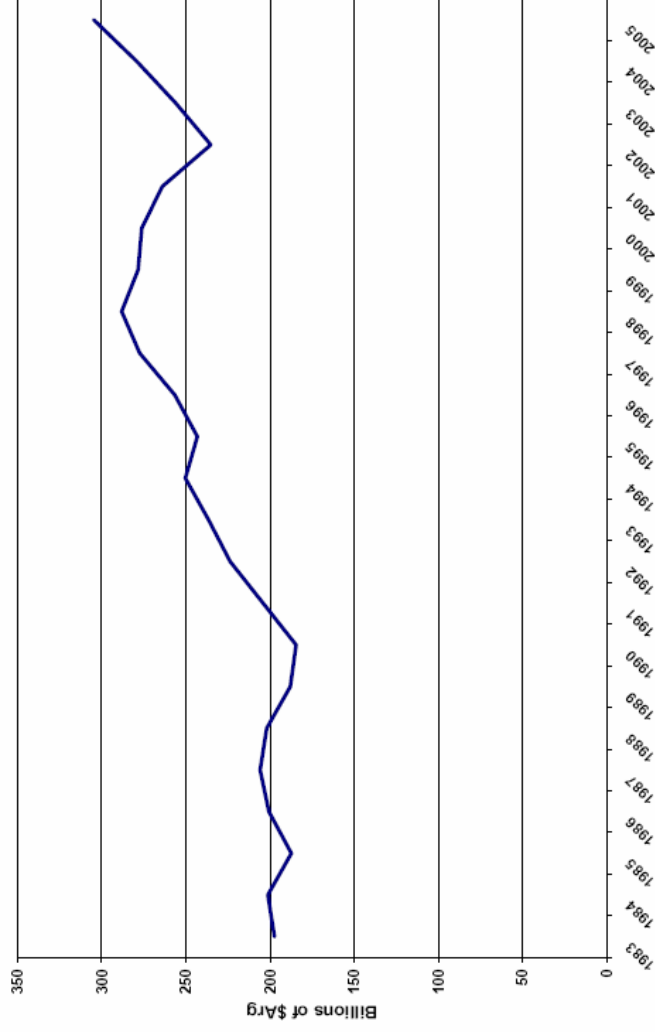
Subte net



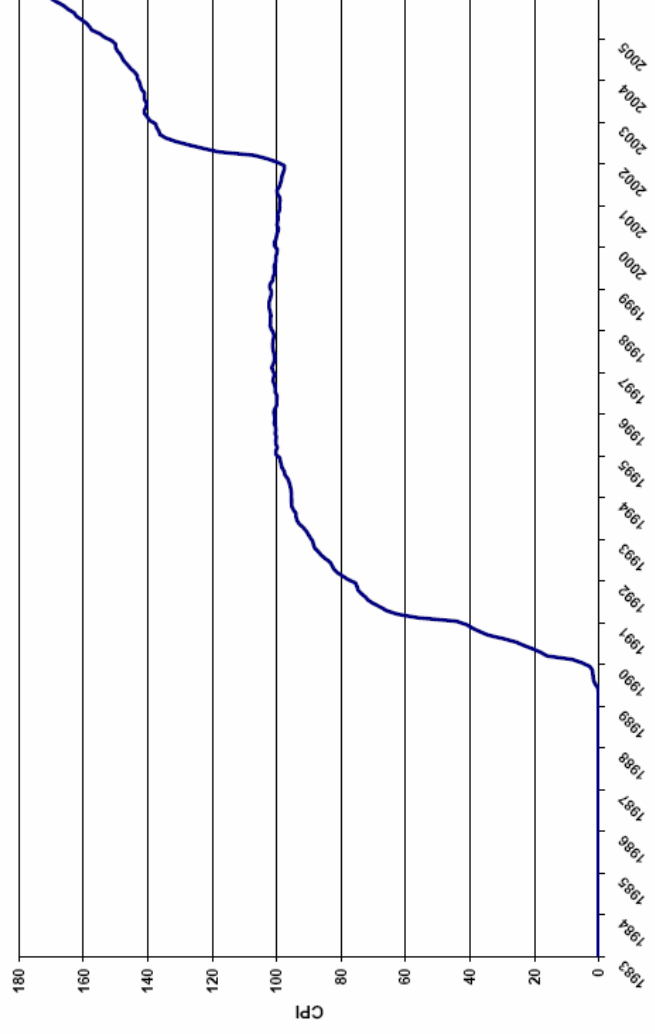




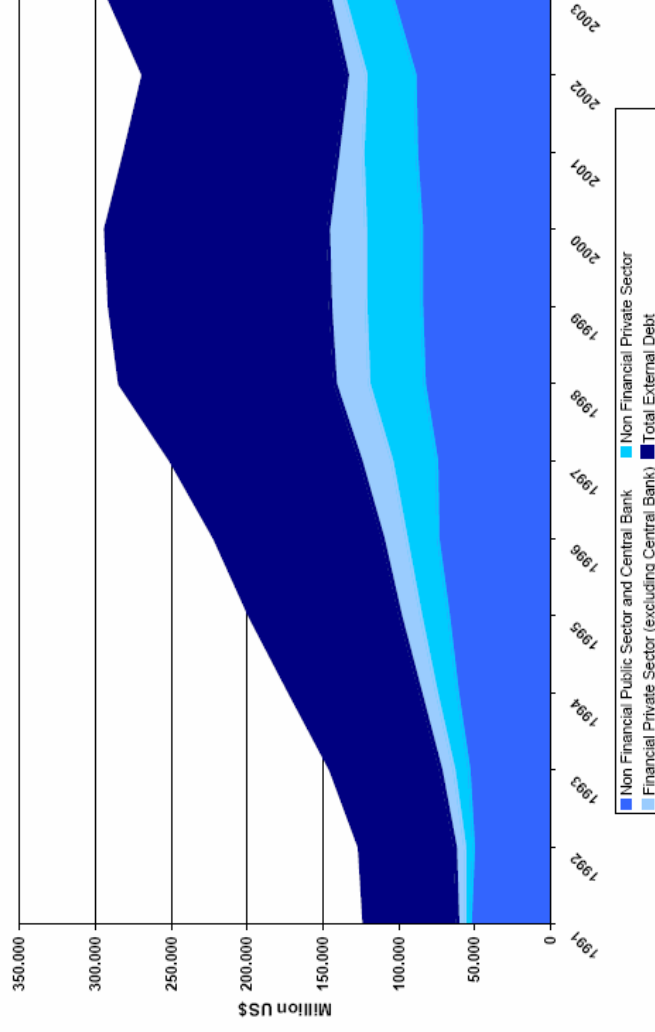
a) GDP (1993 \$Arg)



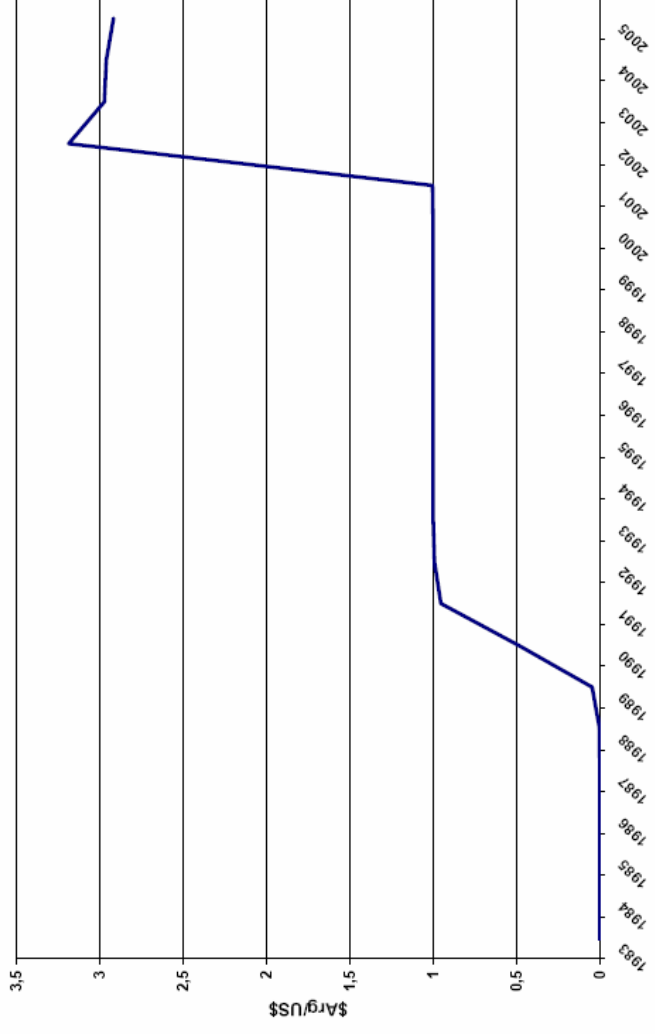
b) Consumer Price Index (1999=100)

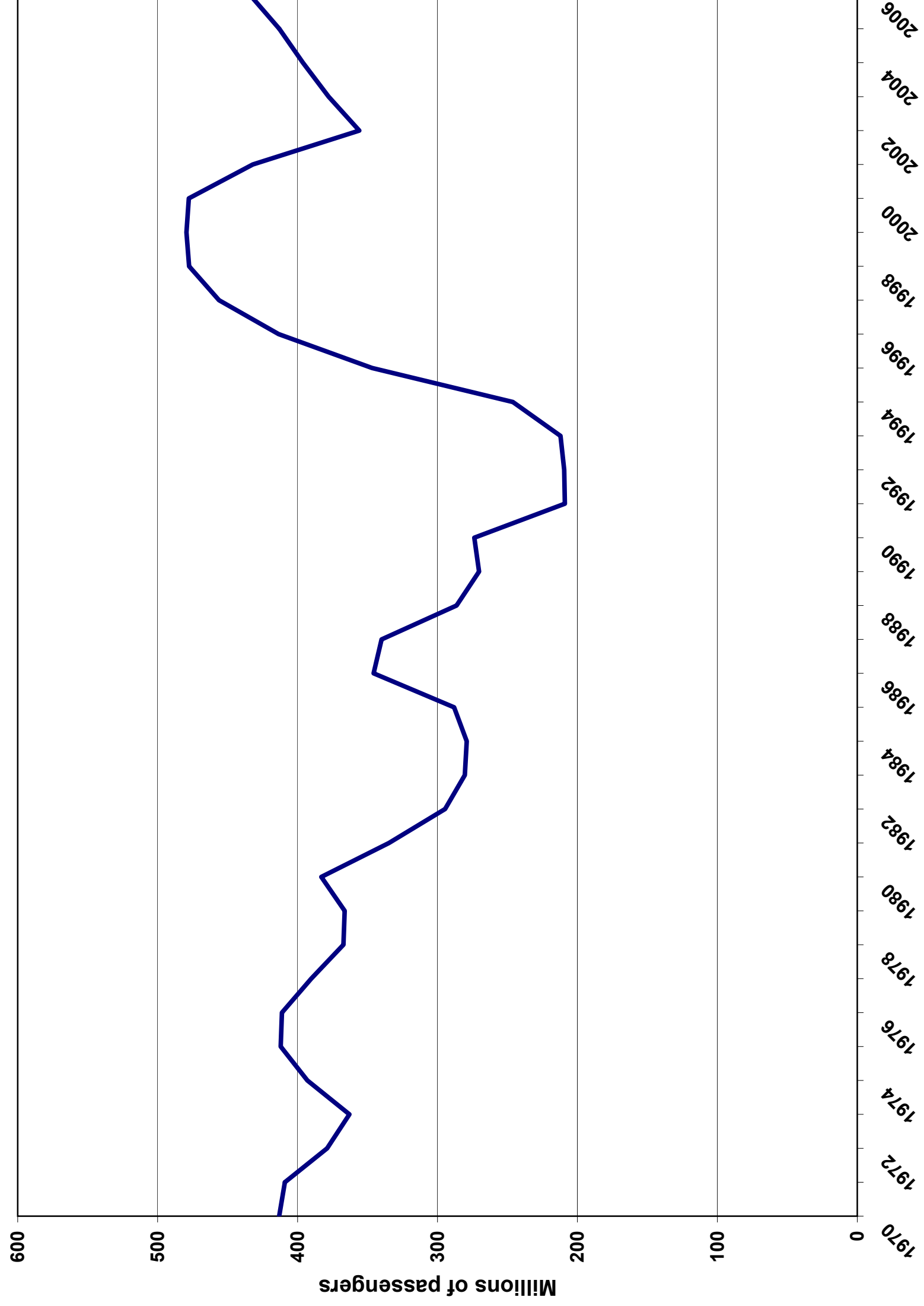


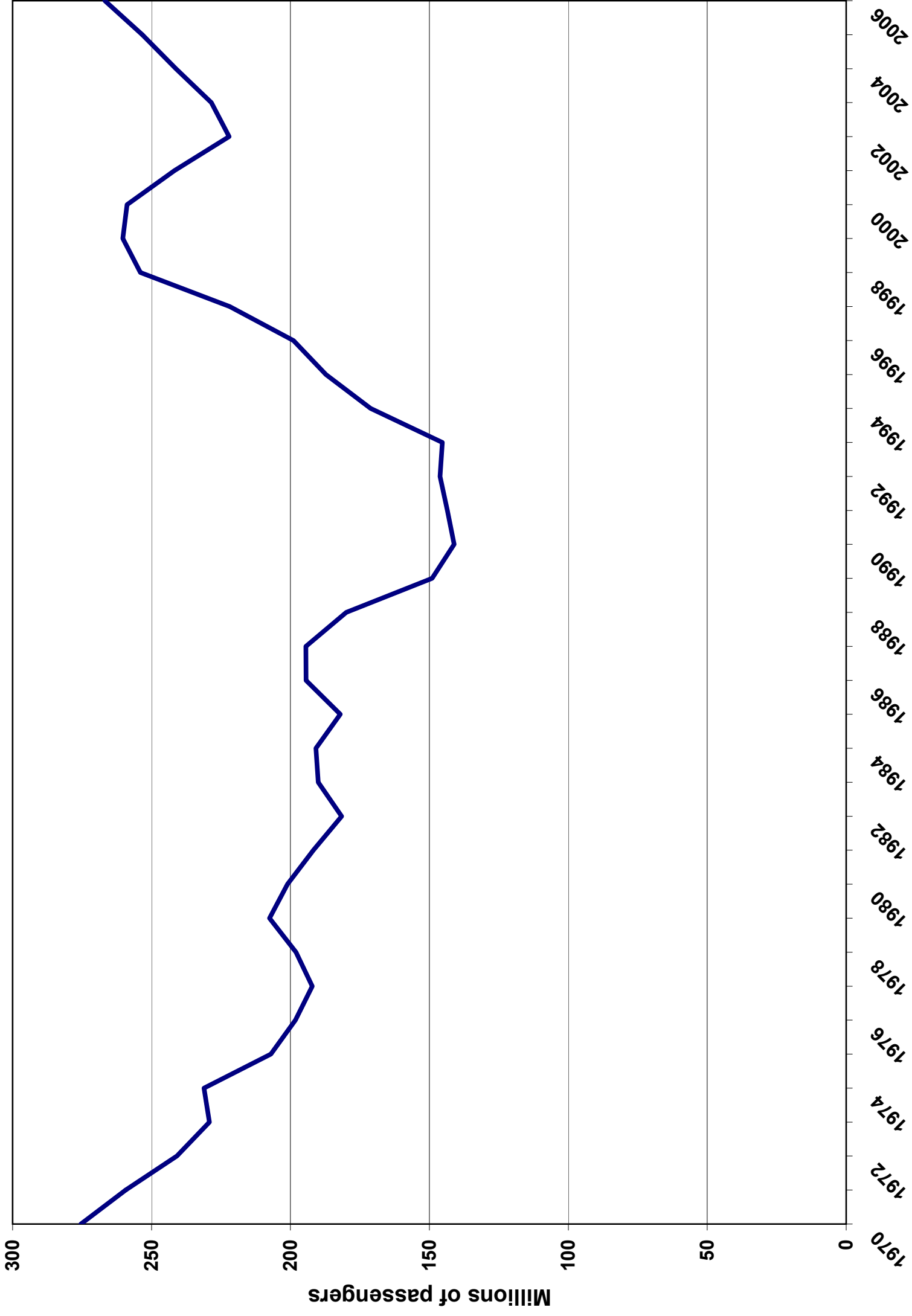
c) External Debt (Million US\$)



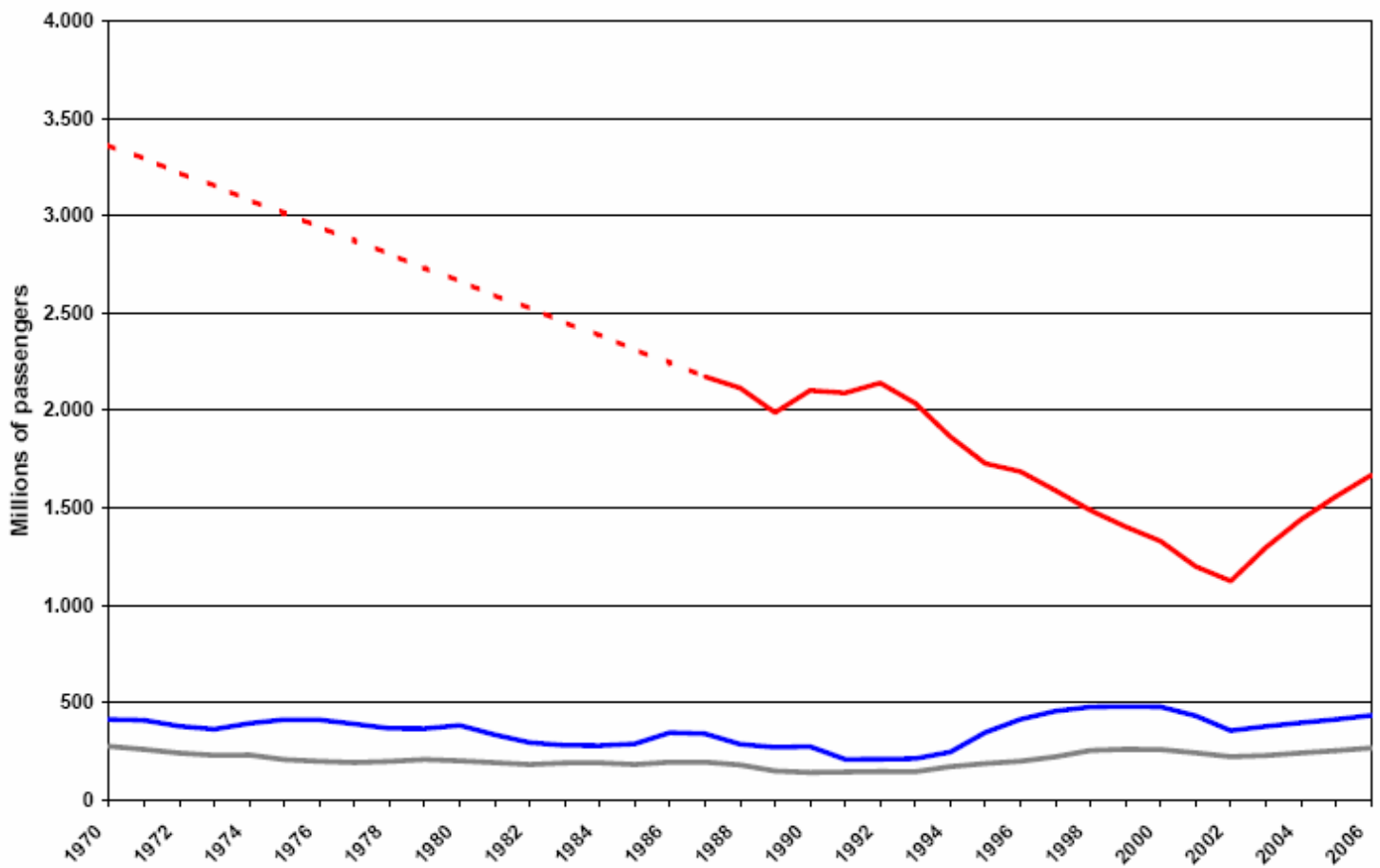
d) Exchange Rate (\$Arg/US\$)



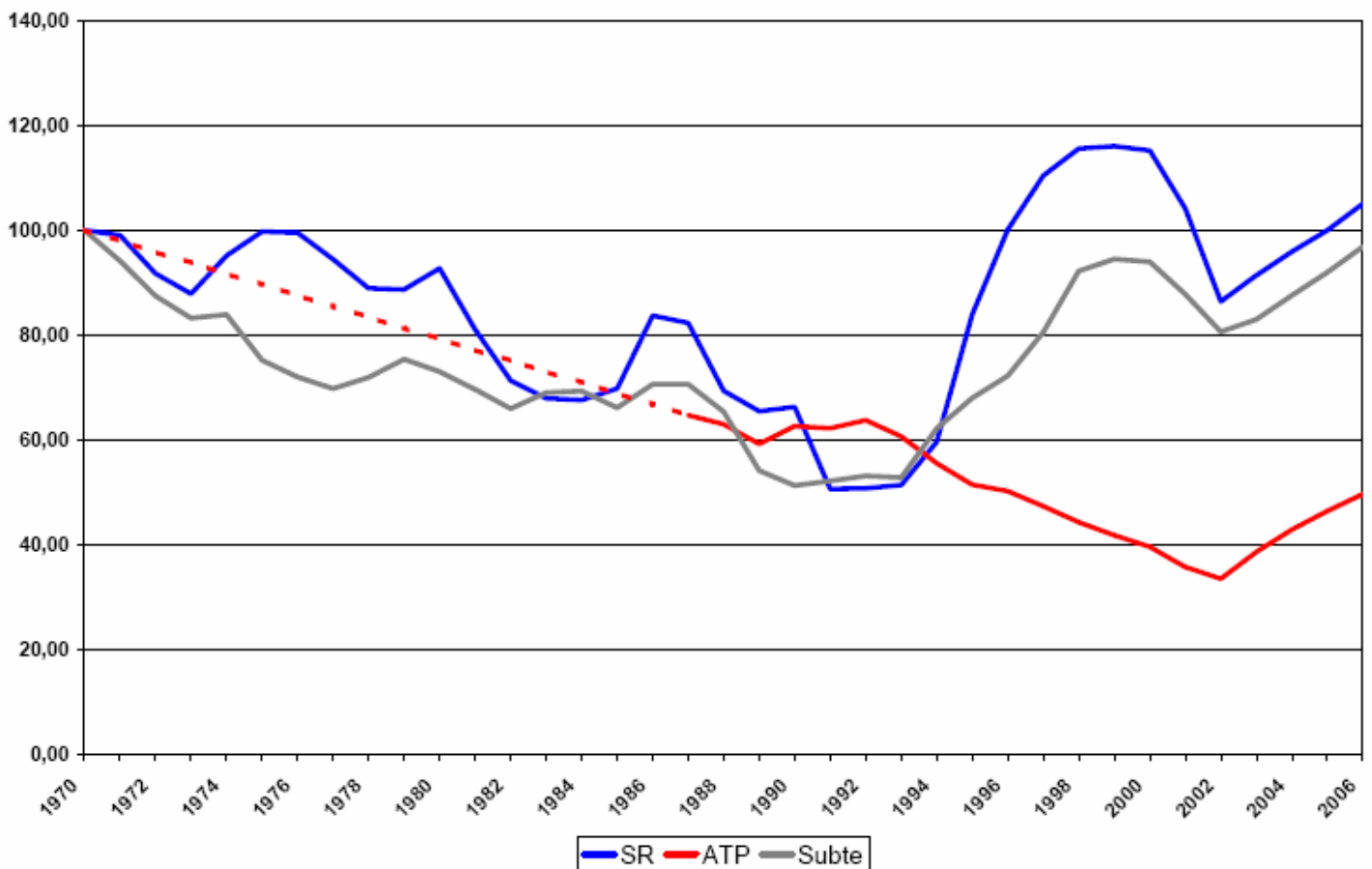




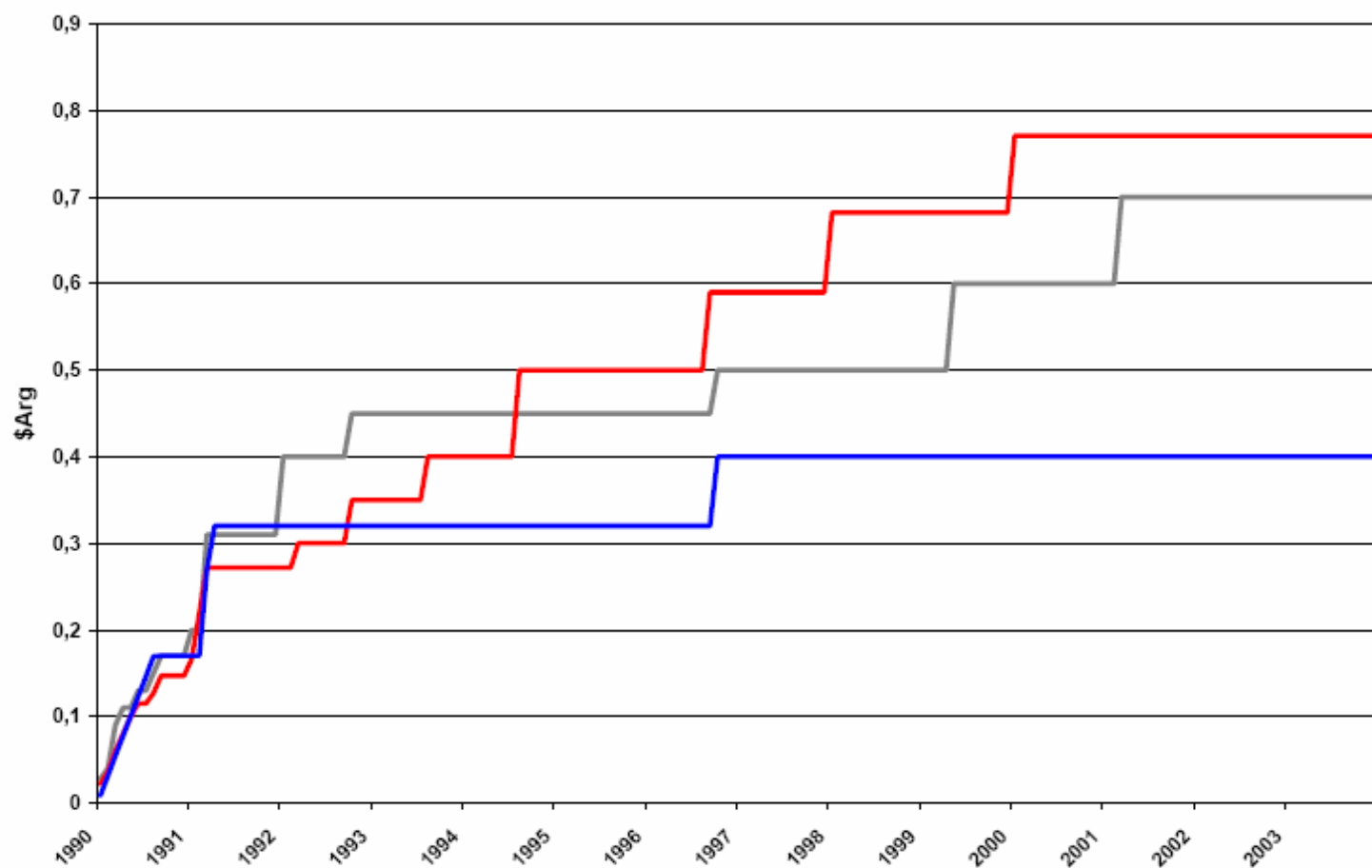
a) Absolute Ridership



b) Comparative Ridership (1970=100)



a) Fares (current \$Arg)



b) Fares (Dec-03 \$Arg)

