



EUROPEAN TRANSPORT POLICY: IDEAS FOR EMERGING COUNTRIES

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ABSTRACT

This paper presents the main aspects of the European Transport Policy and its recent evolution and tries to extract some pointer for enhancing the same in Latin America. There are several aspects of European Transport Policy that are of direct relevance to Latin America, in particular the view that there are no Master Solution, no magic bullet. The paper considers some policies in greater detail, for example, the emphasis in internalising the cost of externalities, mainly congestion and emissions.

But Latin America is not Europe and the differences are at least as important as the similarities; these are also explored in this presentation. The most significant one stems from differences in car ownership levels and this puts Latin American policy makers in a privileged position: they can learn from the mistakes of Europe and act more wisely. The paper discusses two critical issues, the public transport vicious spiral (sometimes called car vs. public transport vicious circle) and the so-called Development Trap (car owners ignore public transport provision when relocating and corner themselves into longer and longer journeys and more stressful lifestyles. The lesson is that travel behaviour can no longer be seen as a “given”, it is part of the problem and the solution.

The paper then highlights some examples of good practice in Latin America, in particular in the areas of bus transit, congestion charging and low-cost information systems.

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1. INTRODUCTION

It has been suggested sometimes that European Transport Policy is a better model for Latin America than that provided by the policies in the US or Australia. The argument is that Europe relies less on the private car and more on public transport in sorting out mobility in cities and urban areas. This greater reliance on more efficient transport modes and greater preoccupation with sustainability and the environment would provide a better pointer for Latin America.

Of course, as with many generalisations, the assertion above is only partially true. In many ways, Latin America is following its own path in Transport Policy, and it seeks to learn from the policy mistakes and success wherever they come from. This is a healthy attitude and deserves support of academia and practitioners alike.

Within this context, the purpose of this paper is to explore the recent trends in Transport Policy in Europe and to extract some ideas and suggestions to assist in the development of appropriate policies for the emerging countries in Latin America. In principle, these pointers would also add value to transport policies in other emerging countries but the focus is firmly here in Latin America and in urban areas.

The paper is organised as follows. The next section (2) reviews the recent evolution of European Urban Transport Policy as stated in the main official documents of the European Community. This is followed by comments on the practical implementation of Transport Policy in European Countries with emphasis in Britain. Section 4 looks into the evolution of transport issues in Latin America and identifies some of the key problems facing countries in the region. Section 5 investigates some examples of good practice in Latin America. These cover progress on bus transit, something Latin America can offer to the rest of the world, is discussed together with Congestion Charging and web technology to support public transport in Latin America. Finally, Section 6 seeks to put together some conclusions from this paper.

It must be stressed that the views offered on this paper are essentially personal ones. They do not reflect the view of any institution. The emphasis provided here reflects the personal experiences of the author rather than a concerted view resulting from consultation and academic research.

2. EUROPEAN TRANSPORT POLICY

Urban Transport Policy in Europe owes a good deal to the “Traffic in Towns” report led by Sir Colin Buchanan (1963) some 40 years ago. This report explored how could future traffic (cars, buses and lorries) be accommodated in urban areas in Britain and the rest of Europe. From this important report it is possible to draw many key conclusions; in the present context, I believe the two most important ones are as follows:

- It is not possible to satisfy the demand for mobility, in particular through the use of the private car, without sacrificing the environment, quality of life and local communities.
- The resources required to just manage and contain these effects are enormous.

The evolution of urban transport policy in most European countries can be seen as an application of these findings. The Report considered a few case studies where it investigated the measures required to protect the environment and quality of life and generally found that a combination of measures and investments were required and that even then, the results were only a palliative. The linchpin of this approach has been Demand Management, mostly in the form of traffic and parking control as means for car restraint.

A more recent document has established the current view of European Transport Policy, the White Paper: European Commission (2001) "European Transport Policy for 2010: time to decide". This document recognises the same problem and discusses four possible approaches to dealing with it:

1. Traffic (car) restraint through physical means and parking policy.
2. The development of a sophisticated pricing policy that would charge all users for the (social) marginal cost incurred while travelling. Congestion pricing would be the most important element of such a policy.
3. The introduction of (congestion) pricing mechanisms coupled with measures to support more efficient modes of transport (usually public transport but also the so-called "slow" or "soft" modes: cycling and walking).
4. The package of measures outlined in (3) plus a set of targeted investments on the transport networks, mostly in order to remove particular "bottlenecks".

The White Paper recommends the last of these approaches and states that the others are only partial solutions to the problem. As the Paper states: there is not "silver bullet" or magic solution to all these problems. The White Paper then fleshes out these ideas in four parts.

Part One deals with the task of "shifting the balance between transport modes". It is recommended to achieve this through improvements in regulated competition and improving the interfaces between modes or within the same type of service.

Part Two is devoted to policies to "eliminate bottlenecks". The Paper identifies physical and financial constraints. Physical bottlenecks are to be eliminated through targeted infrastructure projects whilst financial constraints through the involvement of the private sector and the pooling of funds.

Part Three is perhaps the most important: “placing the user at the heart of transport policy”. This requires reducing the number of traffic accidents, an area where Europe has achieved significant success. A key point is a policy towards gradual charging for the use of infrastructure implementing a price structure that reflects the costs to the community. This part also deals with rationalising urban transport, encouraging demand stimulation through experimentation and putting emphasis in “transport with a human face”.

Part Four deals with “managing the globalisation of transport”. This is something central to Europe that Latin American countries cannot escape from either. Countries, cities and regions compete with each other not only in the national but also in the global context. The provision of a good transport system will make some cities more attractive than others and an understanding of how investment in this and other areas affects the desirability of a region as recipient for international investment will have great importance in the future.

From these four parts some additional key issues of relevance to emerging countries can be highlighted. In my view the most important are as follows.

- **Efficient Pricing.** The transport market is always likely to be imperfect, for a number of reasons. The introduction of appropriate user charges that reflects the costs to the community is seen as a way of enhancing this market. The issue here is not so much on quantifying these costs as translating them into prices that really reflect the marginal costs incurred at the time they are incurred. This is important as one expects these prices to influence behaviour. The introduction of average charges through simple measures like fuel tax fails to charge appropriately for congestion where and when it happens; therefore, little can the user do to reduce these costs.
- The coordination of different modes and services is seen as paramount to provide “seamless” door-to-door integration between services. Information technology can play a key role in this integration through advanced ticketing systems (including, but not only, SmartCards) and intelligent information for travellers through Variable Messages and Webpages.
- It is politically very difficult and economically unjustifiable to freeze all investments in infrastructure. The reduction of bottlenecks, even if sometimes transfer most of the problem to other locations, is seen as desirable.
- An association with the private sector, through the so-called Public Private Partnership or similar means, is also a key element of modern transport policy. The private sector has a lot to offer in terms of faster response times, creativity and project management skills whilst the public sector can make sure the projects address the requirements of the community.
- Urban logistics is a new area of activity seeking to optimise the planning of lorry routes, transfer stations and the delivery and collection of parcels and goods in urban areas. These are usually supported by good Geographical Information Systems.

3. TRANSPORT POLICY IN PRACTICE

It is sometimes (many would say *often*) the case that Transport Policy in practice is somewhat different from that stated in documents and declarations. One of the main successes of European Transport Policy is the implementation of composite strategies. It was recognised quite early that single measures fail to achieve good results. Most measures have one or more undesirable “side effects” that need to be compensated for with other, complementary, measures. In that sense, the core policies in Europe have combined pricing strategies (parking and public transport fares), support for efficient modes and targeted intervention, in essence, what Traffic in Towns said 40 years ago.

Road Safety Programmes have been very successful in reducing accidents in urban and rural areas. Traffic calming measures in residential areas have contributed to improve the environment and further reduce accidents. Parking pricing and restraint and its control have been a major contributor to managing demand in cities.

Road Pricing, or in its more acceptable name, Congestion Charging, is becoming a major issue in Europe after been successfully implemented in Singapore for many years. Early European adopters used tolls on access tunnels and bridges to price use of scarce urban roads; Norway pioneered this approach. London is embarking on a system more akin to Singapore, charging £5.00 per car entering the central area from the 17th of February 2003.

Another innovative area in European Transport Policy have been efforts to achieve changes in travel behaviour. The main driving force behind this effort has been the environment and Australia has really led in this field. A number of initiatives have proved to be unexpectedly successful. They include:

- General campaigns to reduce use of the car: TravelWise, TravelSmart
- In-depth programs of behavioural change: Travel Blending and Living Neighbourhoods
- Targeted micro-marketing campaigns to increase the use of public transport
- Promotion of slow modes: cycling and walking
- Requirements for companies to develop and implements Travel Plans to reduce the use of the car for employees and customer access

These campaigns have proved that travel habits are not “given” and the well-designed measures can achieve important results. Travel Blending, for example, has been applied in cities in Australia, Great Britain, the USA and Chile and in all of them reductions in the use of the car of between 5 and 20 % have been achieved (Ampt, 1999, Ampt and Willumsen, 2000).

Travel Blending is centred on the individual and its family and looks at the pattern of travel of all participants over a whole week. The family travel diary is then analysed (by a computer program and checked by experts) and suggestions are given to reduce dependency on the private car. The family may adopt some of these suggestions and after a while a new travel diary is compiled and analysed. The scheme is monitored over time using the car odometers.

The following table shows results from the application of the technique in three very different environments: Adelaide in Australia, Nottingham in the UK and Santiago, Chile. As the scheme is voluntary, one must assume that those not taking part would retain their current travel habits; this must be taken into account when appraising the scheme.

	Adelaide %	Nottingham %	Santiago CI %
<i>Only participant, one weeks</i>			
Total number of trips, car driver	-22.7	- 7.6	-25,4
Trip distance travelled (Km.)	-21.3	-14.2	-34,5
Total time spent in the car (hours)	-26.2	-11.8	-26,7
<i>Participants and non-participants</i>			
Total number of trips, car driver	-13.6	-3.3	-16,9
Trip distance travelled (Km.) per car	-11.2	-6.2	-23,3
Total time spent in the car (hours)	-19.3	-4.8	-17,0

Table 1: Percent changes after Travel Blending programmes in areas of Adelaide, Nottingham and Santiago de Chile. A negative figure indicates a reduction.

4. TRANSPORT POLICY ISSUES IN LATIN AMERICA

The first thing to notice is that Latin America is very different from Europe. There are, of course, many things in common, including two important European languages; but many other features are distinct.

For a start, the level of car ownership is closer to 10% in Latin America in contrast with 48% in the European Community. In most of Latin America the private car is still seen as somewhat of a status symbol and an indicator of progress. Despite the relative low levels of car ownership, road congestion can be very significant in large cities. This is of particular concern, as car ownership will rise with income levels putting even greater pressure on infrastructure and generating further delays and emissions.

There are, in fact, two “vicious circles” here, a short/medium term one and a long term one. In the short term, as incomes grow and more people choose to use their cars instead of public transport the operators have to reduce services, increase fares or both. This makes using the car even more attractive and therefore reinforces the public transport downwards spiral. Subsidies and car restraint measures may slow this down but are never able to revert the process.

In the longer term, the problem becomes more acute as car-owning families start to choose places of residence and work independently from the provision of public transport services. Developers find it easier to sell the “dream house” with garden and nice neighbours, regardless of the longer car journeys and wasted time spent in congested conditions. The de-coupling of home/workplace choices from transport provision results in low density housing that is too difficult to serve by public transport efficiently. This is the development trap, higher incomes and dream homes may result in stressed lifestyles and neighbourhoods that are too expensive to serve by public transport. The costs in wasted time, emissions and congestion externalities of this outcome are very considerable. The accumulation of rational individual choices results in an arrangement that is more expensive and less desirable both for the individual and society.

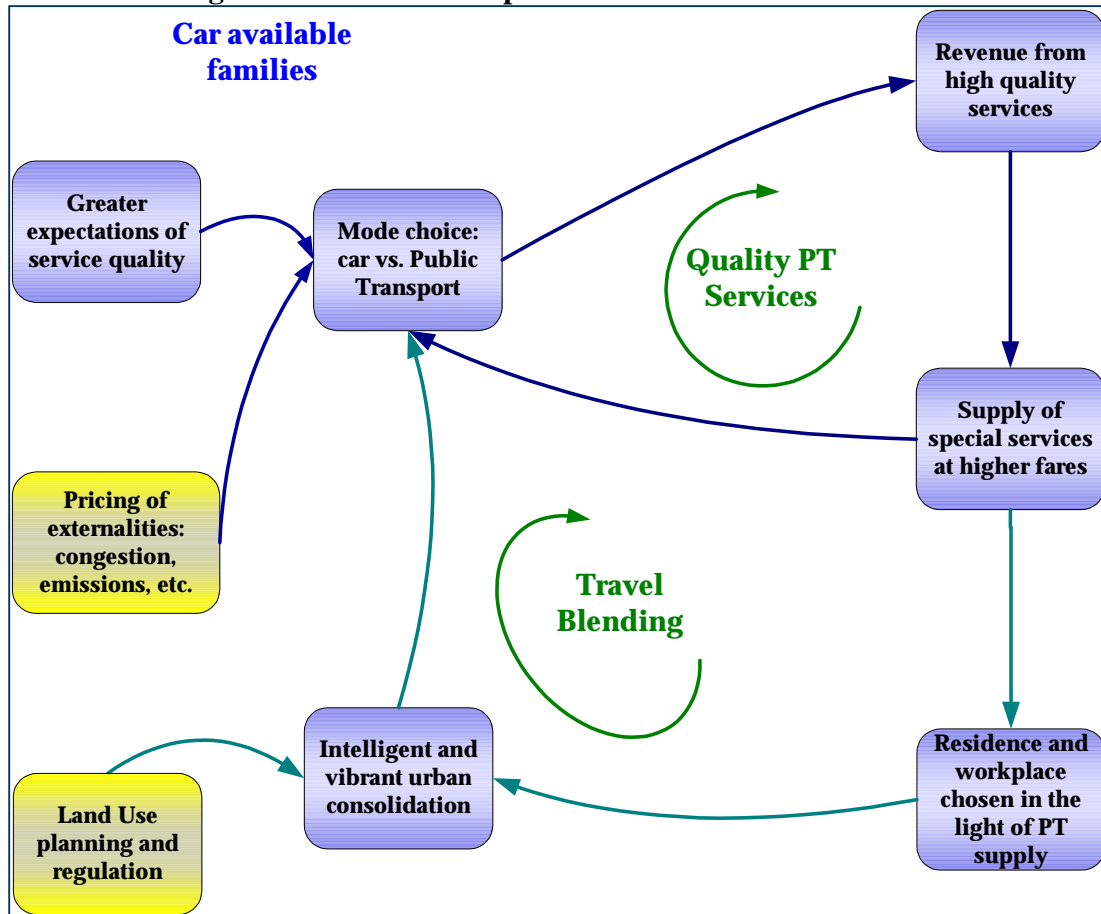
The double challenge of population and economic growth requires a more innovative approach. This must seek to:

- Provide the type of services required by car owners and non-car owners and recognise that these may well be different
- Provide information and support for better decisions (especially in the longer term) on the part of the individuals
- Internalise externalities so that individual decisions consider all relevant costs, to them and to society

In our experience it has been established that car owners are more interested in the quality and reliability of public transport services than in their fare; attitudinal surveys in this segment often identify a Metro system as the only alternative worth considering. Lower income travellers, on the other hand, value low fares, access (shorter walks) and reliability over other quality features. How to provide differentiated services, each with the characteristics expected from different market segments, is one of the key challenges in transport policy in emerging countries.

A couple of ideas are offered in Figure 2. It is suggested that the provision of good public transport services combined with the pricing of externalities should help to arrest the PT Vicious Spiral. The avoidance of the Development Trap requires sensitive and enforceable land use policies and regulations coupled with an effort to increase the quality of travel decisions through awareness campaigns and programmes like Travel Blending, Living Neighbourhoods and Green Transport Plans.

Figure 2 Measures to improve travel decisions



5. EXAMPLES OF GOOD PRACTICE IN LATIN AMERICA

Bus transit

From the original examples of Curitiba, Sao Paulo and Porto Alegre new innovative Bus Transit systems have been extended to Quito and Bogotá. Most of the technical skills and knowledge required to develop and implement these systems has been home grown, not imported from the North.

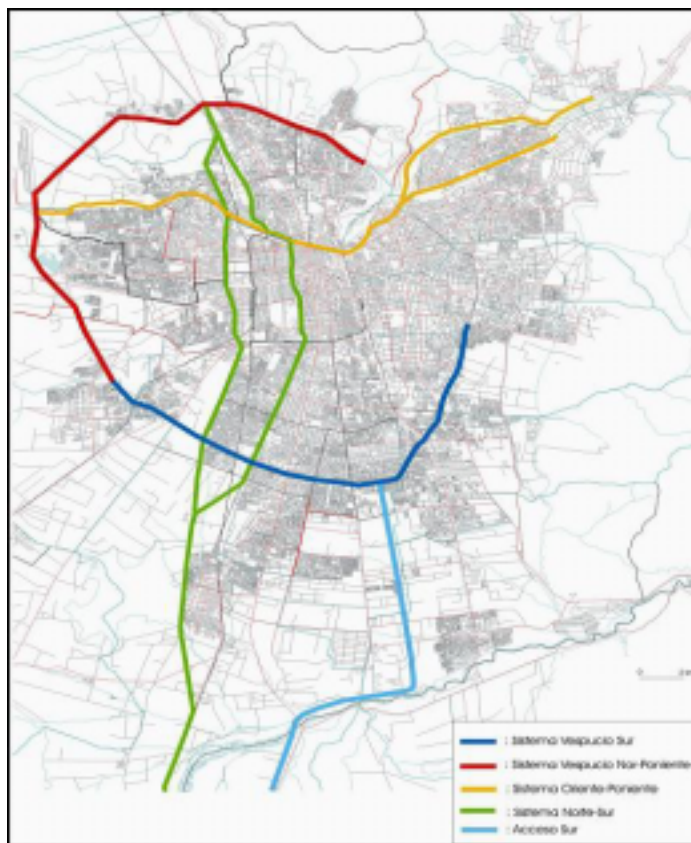
Bus Transit is an excellent vehicle to offer high quality public transport services, good enough to attract a share of car users, at a fraction of the cost of a metro system. The most recent example, the Transmilenio Scheme in Bogotá, has infrastructure costs of less than US\$5.5 million per km and its fares cover operating and vehicle costs.

As Transmilenio is a retrofit rather than “designed from the outset” as in Curitiba, it provides a better example for other cities to adopt. Transmilenio has generated considerable interest in other cities in Latin America, Africa and Asia. As the techniques required to design and implement such systems are better developed and understood we hope to see many other innovative and efficient bus transit schemes in the future.

Congestion charging

Following London, other cities like Milan and Edinburgh are looking closely to the implementation of such schemes. The key problem, as always, is acceptability of the charges. Extensive research has shown, in several cities, the key to acceptability is the proposed use of the funds collected through congestion charging. The use of such funds to improve public transport and invest in removing some key road bottlenecks seems to be the main requirement of users. In the case of Edinburgh, the scheme (only a £2.00 charge in this case) would be cast into a comprehensive Business Case and the revenue stream securitised to provide early funds for investment into three light rail lines.

Santiago de Chile has adopted a halfway solution: the adoption of a scheme of four urban toll road concessions using free-flow electronic toll collection. They are depicted in Figure 3 and they will provide the only significant increase in road capacity in the near future of Santiago.



The first of these concessions will start operating late 2003 and all four will have consistent standards, charge rates, inter-operable tags and enforcement systems. The toll rates vary with time of day and congestion levels and there is a commitment not to provide significant new capacity in competing routes.

This programme can be seen as partial congestion charging as the rest of the network, equally or even more congested, will not be priced (yet). Therefore, part of the network will be priced for efficiency and internalisation of externalities but the rest will remain uncharged for. The revenue collected will go to pay for the new infrastructure but does not make a direct contribution to public transport project. There are some minor investments in segregated rapid transit right of way as part of the concession contract in a couple of cases, but nothing significant in the context of the city.

In a couple of years most vehicles in Santiago will have a tag for electronic toll collection. Perhaps this will be the time to think about a more comprehensive pricing scheme. The examples of London and other cities will also be available to consider, in a more realistic way, how to achieve a better internalisation of urban transport costs.

Information technology applications

The lack of good public transport maps in Latin America is apparent to any European visitor. There are many reasons for this:

- Everybody knows how to go from A to B by bus/car/metro
- People cannot read maps, and those who can do not travel by public transport
- Bus services are too changeable/unreliable to be displayed on a map

It is also clear that these reasons are no longer true in modern cities. Urban areas have grown too large for anybody to be familiar with all services available; word of mouth is no longer sufficient to learn how to reach an unfamiliar destination. It is easier/safer to take the car or use a taxi. Lack of good information is a deterrent to the use of public transport by car owners.

Technology, in the form of web pages, may be of assistance. The provision of guidance on the use of public transport is technically difficult in a webpage environment: unless intelligent short cuts are taken the processing requirements are too large. That is why this service is much less common than advice on how to drive to get from A to B.

ITTL/Steer Davies Gleave have developed such a service for the Buenos Aires Metropolitan Area. It can be visited at www.comoviajo.com. It offers advice on how to connect two (or more) points by public transport, by car or on foot (if appropriate). It provides further information on facilities, places of interest and the cost of taxi journeys.

Once the technology and database are sorted out, it is easy to extend the services to cover information on incidents, roadworks and even specific journeys for those considering moving to a new home.

6. CONCLUSIONS

European transport policies are more relevant to emerging countries than those adopted in the USA, a country more reliant on the private car. They provide pointers for measures to be considered in Latin America. In particular, it is suggested that policies that combine a number of measures are more likely to be successful, for instance:

- Improved land use planning and control
- Efficient pricing of transport modes, including congestion charging
- Improved public transport services geared to specific markets
- Provision of structuring public transport services, metro and bus transit, so that locational decisions can be based on them
- Provision of good information on alternatives and costs
- Behavioural research and campaigns aiming to improve the quality of travel decisions

In this context, the planner should be less concerned with the technical sophistication of the models used and more engaged in developing the right public-private partnerships to secure sensitive implementations of these policies.

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