

Introducing Preferential Treatment for Public Transportation: What Policy-Making for Developing Countries?

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ABSTRACT: Buses and in general at-grade public transportation remain the most important component of transit services in urban areas. However, the steady increase in travel demand, essentially private automobile, has resulted in a growing level of congestion, affecting both cars and public transportation. In response, several cities have moved since the 1970's towards the implementation of preferential treatment. The objective of the article is to look at the policy-making process behind the implementation of preferential treatment. Based on 11 case studies world-wide, it wants to identify what the differences in the policy-making processes are between developed and developing countries.

RÉSUMÉ : Les bus et les transports publics de surface restent le composant des transports collectifs le plus important dans les zones urbaines. Cependant, la croissance soutenue de la demande en transport, essentiellement la voiture particulière, a eu pour conséquence une augmentation du niveau de congestion, affectant aussi bien les voitures que les transports publics. En réponse, un nombre de villes se sont orientées depuis les années 1970 vers la mise en place de transports de surface en site protégé. L'objectif de cette communication est de regarder aux processus d'élaboration de politiques de transport de surface en site protégé. A l'aide de 11 études de cas dans le monde, elle veut identifier quelles sont les différences dans les processus d'élaboration de politiques entre les pays développés et les pays en développement.

1 INTRODUCTION

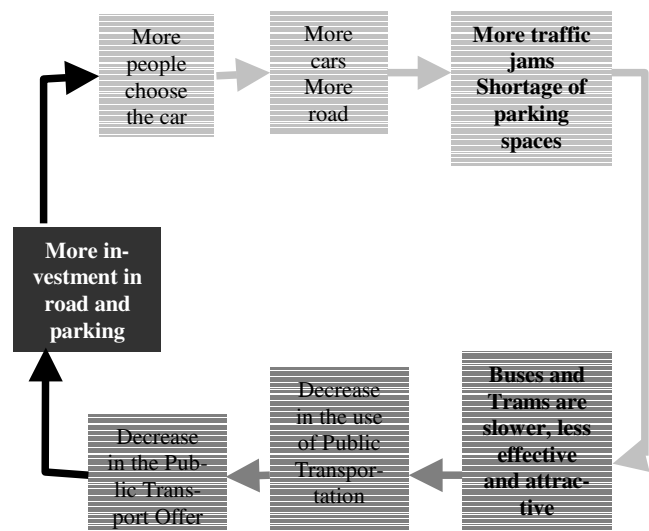
At-grade public transportation (buses, tramways...) remains the most important component in offering transit services in all the urban areas, whether they are feeder to a heavy rail system or an independent network. However, the steady increase in travel demand, essentially private, has resulted in a growing level of congestion, affecting both cars and public transportation. Figure 1 illustrates the cycle of degradation that the majority of cities are facing today. More cars mean more congestion and slower at-grade public transportation.

1.1 What is Preferential Treatment?

Preferential treatment is a broad definition that combines all the means to insure that priority is given to transit. It can be divided three technical categories:

- Operational improvements (including queue jumps, traffic signal priority, exclusive lanes...)
- Bus Rapid Transit (BRT)
- Light Rail Transit (LRT)

Figure 1: Cycle of urban transport degradation¹



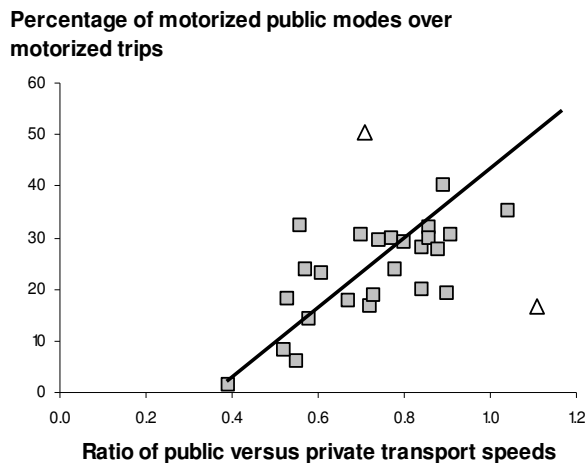
Whereas preferential treatment can rely on different aspects of technology, such as Global Position-

¹ Source: Better Mobility in Urban Areas, UITP.

ing System or Automated Vehicle Location, to insure that priority is physically given, the institutional context turns out to be much more problematic with respect to implementation. Acknowledging the geographical and administrative fragmentation of the public transportation decision-making (several administrations spread over several jurisdictions), the real challenges for preferential treatment lie in the management of all the stakeholders, in addition to the public, as conflicting interests may arise refusals to implement preferential treatment.

Transportation mode choice in urban areas is strongly driven by the value of time and it can clearly be seen that the most competitive public transportation networks, i.e. those with the highest modal share, are those offering the highest commercial speed, relative to private automobile speeds (UITP, 2001). Figure 2, from UITP's Millennium Cities Database, also indicates the importance of speed for preferential treatment – therefore priority – in the 26 cities in the database with bus lane, tramways or LRT.

Figure 2: Relation between speeds and modal share



Preferential treatment represents an opportunity to break the cycle of degradation and therefore revive public transportation in offering competitive level-of-service.

1.2 Challenges

The benefits from preferential treatment are quite self-supporting: better schedule adherence, higher frequency and level-of-service. However, even though transportation professionals tends to refer to them, the experiences in Curitiba (BRT) and Zurich (LRT) in the 1970's appear to remain peculiar due to their political context (the strong leadership of Lerner in Curitiba or the Swiss democratic system) and the replication of such innovations remains rare

relatively to their benefits. This is due to two challenges preferential treatment faces.

The first challenge of preferential treatment is to insure a sufficient speed to transit, as shown in figure 2, where the higher is the transit speed (relatively to private modes), the better the modal share.

The second challenge relates to policy-making. Insuring higher speed incurs limitation on car use; therefore it can be perceived as politically delicate for decision-makers towards the institutions involved and the public opinion.

2 METHODOLOGY

Using the agenda-building models, a-priori hypotheses are tested on 11 case studies of preferential treatment implementation. Afterwards, the critical factors in the policy-making process are singled out in developed countries. These same factors are analyzed in the implementation process of Curitiba and Bogotá. Eventually, the article draws conclusions about transit preferential treatment policy-making in developing cities.

2.1 Agenda-Building Theory

The research is using the agenda-building theory, relying mainly on the work of Cobb, Ross and Ross (Cobb, Ross and Ross, 1977). Indeed, they define three models for agenda setting, based on the nature of the initiator of the process. The first one, the outside initiative model, describes how a group, isolated from the decision-makers, manages to put an issue on the formal agenda. In the second one, the mobilization model, the decision-maker himself initiates the issue, but need to reach the public agenda for implementation. Eventually, the inside access model takes into account the will of a group with privileged access to the decision-makers in setting its issue on the formal agenda.

The three models are described through five steps: Initiation, Specification, Expansion, Strategies (of expansion) and Entrance.

2.2 Case Studies

In the 11 cities (summarized in table 1), we conducted a bibliographical review as well as interviews of persons involved in the policy-making process (elected officials, transit directors, planners, engineers...)

Table 1: Preferential treatment in the 11 case studies

| City | Country | Type of Preferential Treatment |
|------------|----------------|--------------------------------|
| Strasbourg | France | LRT |
| Lyon | France | LRT |
| London | United Kingdom | Operational |
| Manchester | United Kingdom | LRT |
| Dublin | Ireland | Operational |
| Honolulu | USA | BRT (2005) |
| Portland | USA | LRT |
| Ottawa | Canada | BRT |
| Zurich | Switzerland | LRT |
| Curitiba | Brazil | BRT |
| Bogotá | Colombia | BRT |

3 HYPOTHESES

Given the preferential treatment context of the fragmentation of the decision-making geographically and administratively, the agenda-building theory asserts that the mobilization pattern should predominate. Based on this hypothesis, we test the following three hypotheses related to the context of preferential treatment:

"The implementation will create an important opposition from the public and stakeholders"

At first glance, preferential treatment can appear as a controversial topic, but in the 11 case studies conducted, the opposition did not halt or hinder policy-making. There was indeed some opposition from somewhat influential interest groups, but the general public never opposed outright the principles of preferential treatment. If there was some opposition, it was observed at the design stage of the project when the community inputs could have conflicted with the technical requirements.

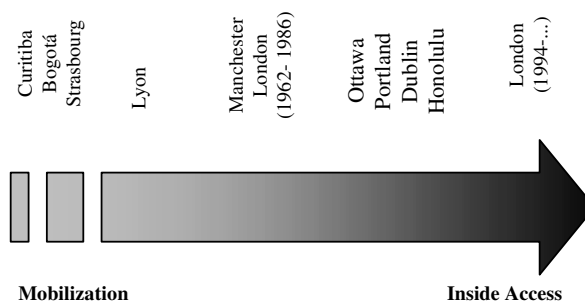
"A policy entrepreneur in the decision-making body is necessary and sufficient to implement preferential treatment"

In Strasbourg, Lyon, Curitiba and Bogotá, the policy entrepreneur's role was crucial. Nevertheless, this is not always the case as London, Dublin, Honolulu, Portland and Ottawa clearly prove that a policy entrepreneur is not a necessity to implement preferential treatment. Moreover, Zurich illustrates that the public can even contradict the decision-makers and require that preferential treatment be implemented.

"Transportation authorities' roles are limited to providing their planning and technical expertise during the process"

The role of transportation authorities is indeed relatively limited. None clearly initiated the policy-making process. However, some brought more than expertise. Two scenarios can be defined as function of the agenda-building model. On the one hand, in mobilization models, the local public transportation agencies supervised the technical studies of what was in effect a foregone conclusion (Strasbourg, Curitiba and Lyon). Here, the presence of strong political leadership meant that transit authority leadership was not needed. On the other hand, for inside access models, the transportation authorities had to wait for a window of opportunity to orientate the issue towards preferential treatment (Honolulu, Dublin, Ottawa, Portland and Manchester).

Figure 3: Case Studies in the Gamut of Models



4 FINDINGS OF THE STUDY IN DEVELOPED COUNTRIES

4.1 Funding

It is not surprising to find that financial investments were in almost all cases an issue (except in Dublin). Heavy financial burden tends to be the easiest way to derail transportation projects (Cobb and Coughlin, 1997) and all the cities had been confronted with budget constraints. The result is that affordability of the infrastructure has been a recurrent issue during the policy-making process in those cities. The decision-makers finally accepted the trade-offs between financial feasibility and political feasibility. Also, the financial burden translated into a tax increase has been crucial in the rationalization of investments. Honolulu, Zurich and Portland's citizens clearly refused any increase in taxes to finance an expensive public transportation system.

4.2 Public Opinion

One of the counterintuitive findings of this study is the fact that implementation of preferential treatment did not raise fierce public opposition – at least regarding the principles of the matter. The underlying reason why an unpopular policy at first glance was implemented smoothly is that extensive public consultations were organized in a way or another. In all cities but London, public consultations were organized prior to the implementation under two different approaches:

- A local consultation of the public who neighbored the implementation (along the corridors) insured the public's feedbacks towards the alignments
- A global consultation, involving the whole city's opinion on the principle of preferential treatment.

Local consultations (Strasbourg, Lyon, Manchester, Ottawa and Dublin) were mostly focused on technical aspects of the corridors. Most of the time, they were community meetings to get the neighborhoods' inputs. On the other hand, some cities have organized citywide consultations:

- Portland and Zurich put the issue to referendum.
- Dublin organized a major survey to define its need.
- Strasbourg, Lyon and Manchester organized community meetings for all citizens (not only in the corridors' perimeter).

Global consultations were not only aimed at explaining to citizens the will of the decision-makers, but also to bring legitimacy to the policy.

4.3 Benchmarking: Effective Arguments for Decision-Makers

It appears that benchmarking played a significant role in Manchester, Strasbourg and Lyon. Indeed, during the policy-making process, decision-makers were inspired by field trips to other cities. These field trips allowed policy-makers to evaluate preferential treatment. This type of benchmarking is particularly useful in convincing decision-makers because preferential treatment was demonstrated as a successful policy in practice. Indeed, when decision-makers were able to compare preferential treatment and underground systems that are performing at the same level, they tended to support the most feasible project, preferential treatment.

4.4 Transportation Planning or City Planning?

Another takeaway from the case studies is the essence of planning, or the driving force of the planning exercise. From the eleven cities studied, planning preferential treatment followed either one of

these two concepts: transportation planning or city planning.

In the first case, the whole purpose of preferential treatment was to improve the public transportation network. The second stream referred to a broader sense of planning: "What type of city is desirable?". Only Lyon and London have focused their plans on the transportation issues. Not surprisingly to see that they are also the two cities that had already a subway network, therefore a culture of public transportation. In the other cities, the planning of preferential treatment was strongly correlated to the planning of a new type of city with a more urban way-of-life. Within this approach, the interaction between transportation and the city was furthered in two streams:

- In Portland, Ottawa and Dublin, the central question of city planning preceded transportation issue. First the actors agreed on a desirable shape for the city (e.g. Transit Centers in Ottawa). Then they focused on building the transportation system would best fit their city's plans;
- In Manchester, Strasbourg, and Honolulu, transportation and city planning came simultaneously. The city was supposed to change with the construction of the system (with more pedestrian areas, a redefinition of the zoning...). In this case, transportation was a tool of change for the city.

4.5 Planning and Implementation Authorities

An interesting finding from the case studies is the distribution of the planning and implementation roles. Table 2 identifies and summarizes the authorities that led the planning and the implementation of the preferential treatment.

Table 2: Organs Responsible for the Planning

| Local /Metropolitan Authorities | Public Transportation Agencies |
|---------------------------------|--------------------------------|
| Strasbourg (CUS) | Lyon (SYTRAL) |
| London (GLC) | London (LT) |
| Honolulu | Manchester (GMPTE) |
| Portland | Dublin (DTO) |
| Ottawa (RMOC) | |

It is hard to find a pattern according the agenda-building models when looking at the planning actors. A lot of planning was carried out by authorities' departments mostly because their public transportation agencies were not entitled to. Indeed, Honolulu, Strasbourg and Ottawa had either no transit agencies or only operators; Portland had created Tri-Met very lately. On the other hand, in Lyon, London and Manchester, the transit authorities were explicitly responsible for planning and took actively part in the process. In Dublin, the Dublin Transportation Office was

created as a direct consequence of the Dublin Transportation Initiative to plan the transportation in the city.

The logic behind those choices might seem unclear but we can say that the agency in charge of the planning was either close to the policy entrepreneur (in Strasbourg) or institutionally legitimate (Lyon, Ottawa and London). Eventually, it is very unlikely to see the operator takes the role, as generally they do not have the human and knowledge resources for such tasks.

5 POLICY-MAKING PROCESS IN CURITIBA AND BOGOTÁ

Curitiba and Bogotá are the only developing cities that provided enough resources to write case studies of their experiences, and transportation professionals tend to refer to them as examples to follow. The main events in the implementation of BRT are summarized below.

5.1 *The Case of Curitiba*

In 1943, the Agache plan, the first plan establishing Curitiba's priorities, pointed out the problem raised by motorization growth. It stipulated the necessity to accommodate the future explosion of the automobile market by creating arterial highways

In 1965, the Plano Diretor de Curitiba (Master plan) was created to tackle the traffic problems. However, it adopted the completely opposite solution of the Agache plan: building the city around the transportation network through the strict control of the urban development along designated corridor.

In 1971, Jaime Lerner was elected/appointed at the head of the city. One of his first decisions was to start the implementation of the Master Plan (with the Instituto de Pesquisa e Planejamento Urbano de Curitiba, IPPUC) and the development of a surface bus-based transit system, using exclusive lanes.

For more than 30 years, the system has expanded with new corridors, express and interdistrict services.

5.2 *The Case of Bogotá*

Bogotá has discussed the construction of transit system for a long time. Building a subway to provide heavy capacity transportation was already on the public agenda in the 40's and failed several time in the 1990's. In 1998, the newly elected mayor Enrique Peñalosa Londoño pushed for the implementation of a bus system by setting a task force and designing the system. In December 2000, Transmilenio, a Bus Rapid Transit system, started operating in Bogotá. Three sections have been completed in less than three years and many other sec-

tions are already planned to provide a complete system to the city by the year 2016.

6 FINDINGS OF THE STUDY IN DEVELOPING COUNTRIES

Through the case studies of Curitiba and Bogotá, we can then evaluate the relevance of the different factors that have been identified as crucial in developed countries:

- Funding
- Public opinion
- Benchmarking
- Transportation or city planning
- Planning and implementation authorities

6.1 *Funding*

Financial constraints in developing countries are greater than anywhere else due to the scarcity of resource. Preferential treatment is often the only viable alternative for emerging economies that can not invest important amount of public funds in fixed infrastructure.

Bogotá and Curitiba's BRT were implemented mainly on the financial arguments. Both cities, in developing countries, could not afford an expensive rail system, and a bus system was the only alternative that would not have outrageously indebted the cities. It even became a leitmotiv in Curitiba: "Fast and cheap is good for Curitiba".

6.2 *Public Opinion*

Even though the public opinion was quite supportive in the 9 case studies in Europe and North America, developing countries offer even more support to policy incurring some direct effects on car use. Indeed, the main reason is that there is a structural difference in the stakes configuration: public transportation constituency is much stronger in developing countries where the majority of people are still relying on collective modes. For example in 1998, 58% of the "Bogotanos" were public transportation users². That is not to say that car-drivers in developing countries are less influential; on the contrary, car-owners generally belong to the upper class of the population and often hold the power. Nevertheless their proportion in the population is much lower than in developed countries¹ and thus the context is more favorable to car restriction.

Curitiba and Bogotá adopted different strategies. In the 1970's, very few cars were running in Curitiba streets; moreover the national context, with a mili-

² Source: Millennium Cities Database, UITP, 2001. The percentage only takes into account the mode share between motorized modes.

tary dictatorship, offered a low opposition in the implementation process. Therefore, no consultation were organized, and preferential treatment was literally imposed.

On the other hand, the implementation in Bogotá included a wide public consultation on preferential treatment. Among other things, were organized: a referendum on car restriction during peak hour “Pico y Placa” (that was widely approved) and negotiations with informal operators.

6.3 Benchmarking

Benchmarking is a factor as relevant in the developing world as it is in the developed world. Curitiba really was an innovator in terms of preferential treatment, so there were no other benchmarks. On the other hand, Peñalosa have always admitted following Curitiba and Quito’s example (Quito having followed Curitiba’s example).

6.4 Transportation or City Planning

Whereas all the developed cities are already at last stages of urban development, developing cities are still growing in terms of areas and population, with high demographic pressure and migration from rural areas. It is the case for Curitiba and Bogotá where Curitiba was at the very beginning of its urban development and Bogotá was still encountering great mutation in its shape. Like other cities in the developed world without a structural transportation system, transportation issues in Curitiba and Bogotá were totally linked to the city development. Indeed, the increase in income and fast motorization had for consequences a degradation of the urban quality of life.

Curitiba used its public transportation network to channel its urban growth, in a preventive way. On the other hand, Bogotá used the Transmilenio project to invest in urban renewal with cycle path, public spaces and parks.

6.5 Planning and Implementation Authorities

The situation in Curitiba and Bogotá appears to be similar to the situation in some cities in developed countries. However a major difference has been that, having been no conventional public transport services in Bogotá and Curitiba, there had been no transport authorities either. The sector was totally unregulated and operated by private companies. Nor did transport planning and management capacities exist at the local government level. After his election, Jaime Lerner gave the powers to the urban planning organization, IPPUC, which became the implementation organization. In Bogotá, Peñalosa appointed a Task Force for the planning and later it became the implementation organization.

7 LEARNING FOR DEVELOPING COUNTRIES

7.1 *Mobilization model predominates in developing countries*

We can see that the implementations of preferential treatment in Curitiba and Bogotá were the results of policy entrepreneurs who imposed their vision.

However, there are other examples that can illustrate the implementation of public transportation preferential treatment such as Kunming (China), Quito (Ecuador), Jabaquara corridor in Sao Paulo (Brazil). Although, they were not included in the initial study, we can refer to them briefly to broaden the scope of the study.

In Quito, the implementation was led by the Mayor Jamil Mahuad, on a policy-making model close to Bogotá and Curitiba. In Kunming, the initiative came from the city officials, with the support of Kunming’s sister city: Zurich (Joost, 2000). On the contrary, the implementation of the Jabaquara corridor in Sao Paulo followed an inside access model with the technical expertise from Metrô Sao Paulo.

7.2 *Assessment of the comparison between developed and developing countries*

We can see that most of the factors identified as crucial in developed countries, were also crucial in Curitiba and Bogotá. Some factors were even more likely to support the implementation of preferential treatment such as the scarce funding or the public support for collective modes.

The conclusions drawn for the developed countries are that inside access models predominate and that a policy is neither necessary nor sufficient. So why does the mobilization model seem to be dominant in the policy-making process of cities in the developing countries?

The reason is likely to be that there was a lack of capacity – at the early time of the policy-making process – capable of replacing political leadership. It is not to say that there is a complete lack of knowledge, but that the knowledge is latent and disorganized, and cannot initiate preferential treatment by itself. In Curitiba and Bogotá, it is the policy entrepreneur that organized and channeled the local knowledge; the same is likely to be true in Quito and in Kunming. On the other hand, Metrô São Paulo was already a well-established, with much technical and strategic knowledge, and therefore could make up for the lack of political leadership.

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This article only reflects the position of the author. It does not reflect the position of the MIT Center for Transportation and Logistics nor the International Association of Public Transport.

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