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# Escuela Ambiental

## **Transit-oriented Development in the metropolitan governance: a comparison between the Colombian case and the South Korean experience**

## **Desarrollo orientado al transporte en la gobernanza metropolitana: Comparación entre el contexto colombiano y la experiencia de Corea del Sur**

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# I. INTRODUCTION

Why consider South Korea (SMA) a benchmark case?

- ❑ 2004 Seoul Public Transport Reform - introduction of transit-oriented policies:
  - Semi-public operation
  - Integrated fare system through smart card
  - Hub-spoke network (bus routes redesigned)
  - Median bus lane (Bus-rapid Transit – BRT) system with public transfer center
  - Adoption of ICT to Transport Management
  - Introduction of Integrated Traffic Management

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# I. INTRODUCTION

The **aim**:

**To understand the process** of territorial and transport policy decisions that were held in the SMA, which makes it an example and case study, to contextualize and replicate in the Colombian case, specifically in the Aburrá Valley Metropolitan Area (AVMA).

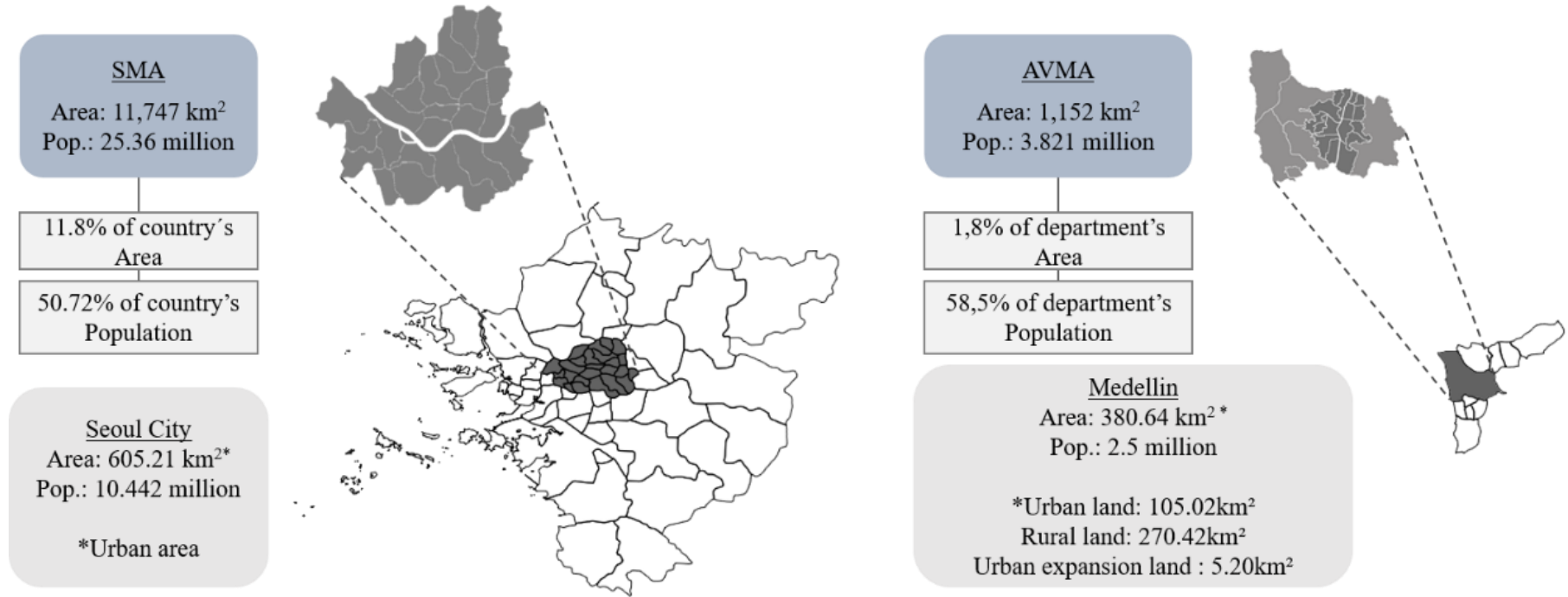
The structure:

- a) an **analysis**
- b) a **comparison**
- c) a series of **implications**
- d) a **guideline** for the reorganization of the collective public transportation bus system and a future transition to a model of Transport - and People - Oriented Development (TOD);

Three themes: governance, financial system and operational aspects

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## II. COMPARISON



Comparison between SMA and AVMA boundaries, areas and population.

Source elaborated by the author

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## II. COMPARISON: Governance Level

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### **Korean Case**

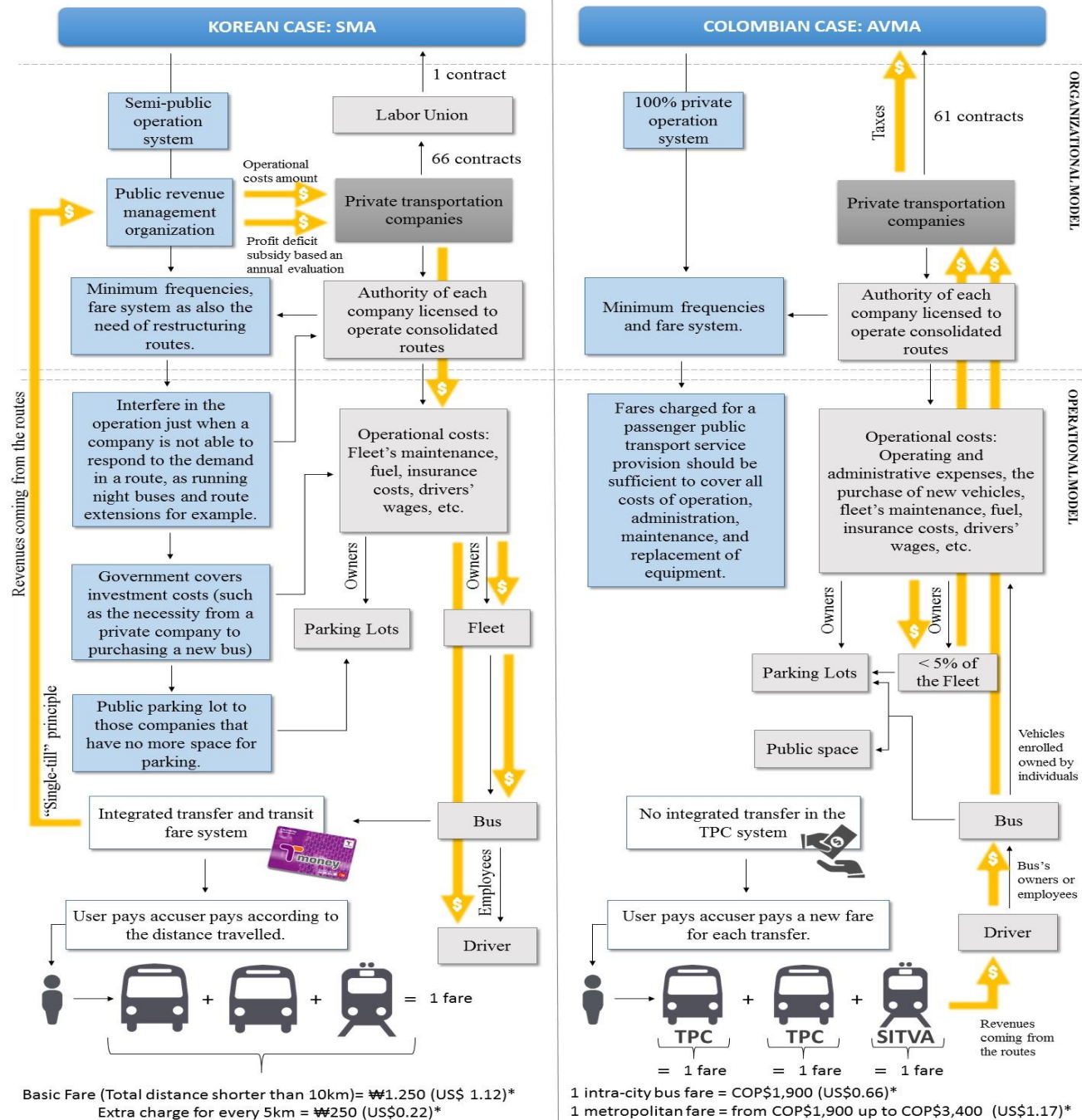
- Overcome the limitation of individual urban planning system.
  - Public Transport-oriented Initiatives
  - Legislative Measures for Large Scale Development
- 

### **Colombian Case**

- Urban Planning system is exercised individually by each municipality.

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## II. COMPARISON: Financial System and Operational aspects



\*Currency conversion made through XE Currency for the date 9/21/2016

## II. COMPARISON: Operational aspects

The corporate scheme of private companies operating the TPC system functions according to the **“affiliator” model**: companies are usually owners of a very small number of vehicles (number that is less than 5%), and in order to comply with the vehicular offer to meet the assigned demand, companies enroll, for their operation, vehicles owned by individuals.

Each bus owner pays the affiliation of his vehicle to the company to operate the bus (in addition to paying taxes that any vehicle owner must pay to the government). This kind of connection allows companies to exempt themselves from some operational and administrative activities, transferring to the owner the responsibility of the maintenance or renewal of the vehicle.

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### III. IMPLICATIONS

- ❑ The metropolitan area does not exercise authority function on land use. It can only guide the territorial management in its urban actions → a negatively impact on mobility and transport integration policies with public space.
- ❑ There is a functional disarticulation of competencies and of management of the various modes of transport in the Aburrá Valley, making the implementation of a single fare and an integrated smart card system impossible.
- ❑ There is no incentive system for companies meeting standards of quality, efficiency, comfort and accessibility of the service.

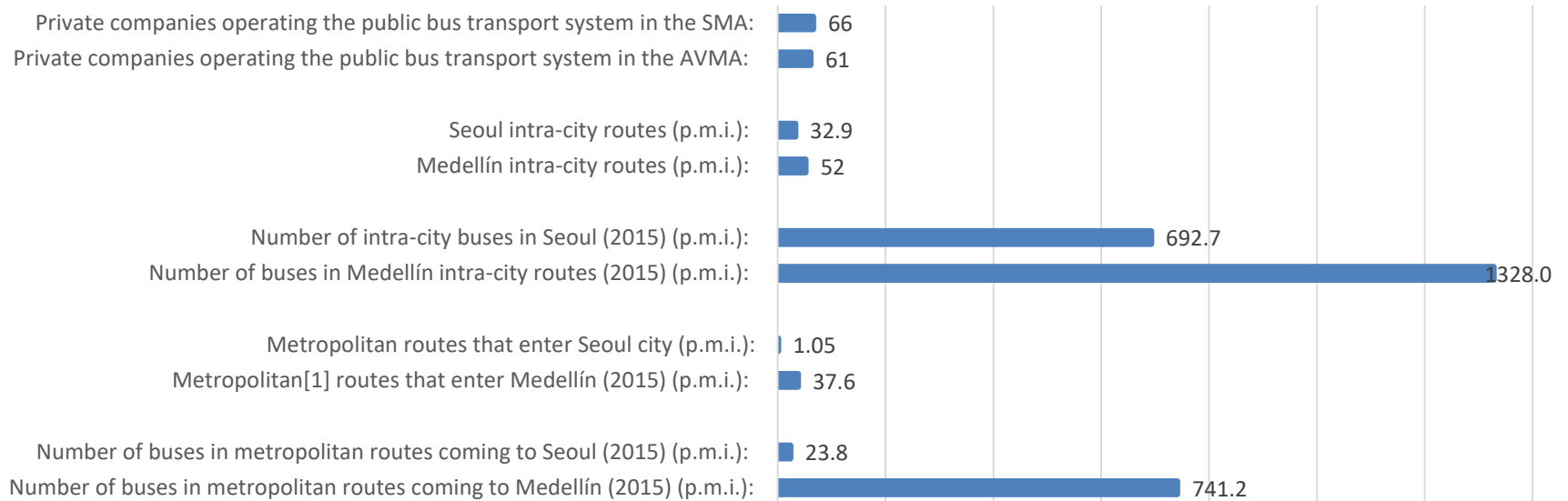
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### III. IMPLICATIONS

- ❑ The management of costs and profits is individual, losing the possibility to manage an economy of scale.
- ❑ The operating companies apply the private market rules to the provision of this public service. As they operate 100% in a private way, they pass on such costs to users through the service fare.
- ❑ When a company generates little profit or begins to present an economic deficit, what it does is to reduce its costs leading to a deterioration in the quality of the service, because it starts to spend less in the buses maintenance, works with older buses, and even pays less to its drivers (yet driver wages are part of the operating costs that enter in the calculation of the fare).

### III. IMPLICATIONS

- All urban routes of Medellín, besides metropolitan routes, generate an oversupply in downtown, as all routes come there, creating problems of congestion and environmental problems of pollution caused by the average age of the fleet and the fuel used.



#### Comparison between SMA and AVMA data about numbers of operating companies, routes and buses. (p.m.i.): per million inhabitants.

*It is not being considered in the data feeder routes, operating under the administration of the Company METRO*

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### III. IMPLICATIONS

- ❑ In the “affiliator” model: driver looks for filling the bus with too many passengers, and disrespect the stipulated frequency, as well as creates a competition among drivers of different routes (or even of the same route) as to the number of passengers. This is what have been called the “**Cent War**”.
- ❑ The only fare reduction that works at the time, for the collective public transport in the AVMA, is the subsidy for students, which subsidizes about 50% of the ticket amount. The ultimate responsibility for ensuring the student’s subsidy is the educational institution.
- ❑ For a person who earns a minimum monthly wage, who lives and works in Medellin, transport costs may account for 31,5% of their income.

### III. IMPLICATIONS

- ❑ There is no information of an average travel time of passengers, and the possibility to verify the existing supply and demand capacity for each route is obtained only through studies carried out for this purpose.
- ❑ Each vehicle owner represents an individual interest in the system, making it difficult to build consensus towards an organized transport system.
- ❑ There is not a model established and recognized by all, allowing an easy reading of route systems on the territory.
- ❑ Access to the vehicles by persons with disabilities, especially with reduced mobility, is very limited.

# CONCLUSIONS

- ✓ AVMA current TPC system structure, in its technical, legal, and financial aspects, is on a state that requires a thorough review to make structural changes. The “affiliator model” can be considered as the underlying problem of the current state.
- ✓ Efforts are under the way to gradually change the collective public transport system into the integrated transport model, but, there are few binding measures that the government can use to impose transport companies to meet these requirements. There are no financial incentives for operating companies to decide do it.
- ✓ Three important determinants that must be taken into consideration to propose effective change strategies, whether in a short, middle or long term: the Aburrá Valley topography, the socioeconomic conditions of the municipalities, and the culture of the society under coverage.

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