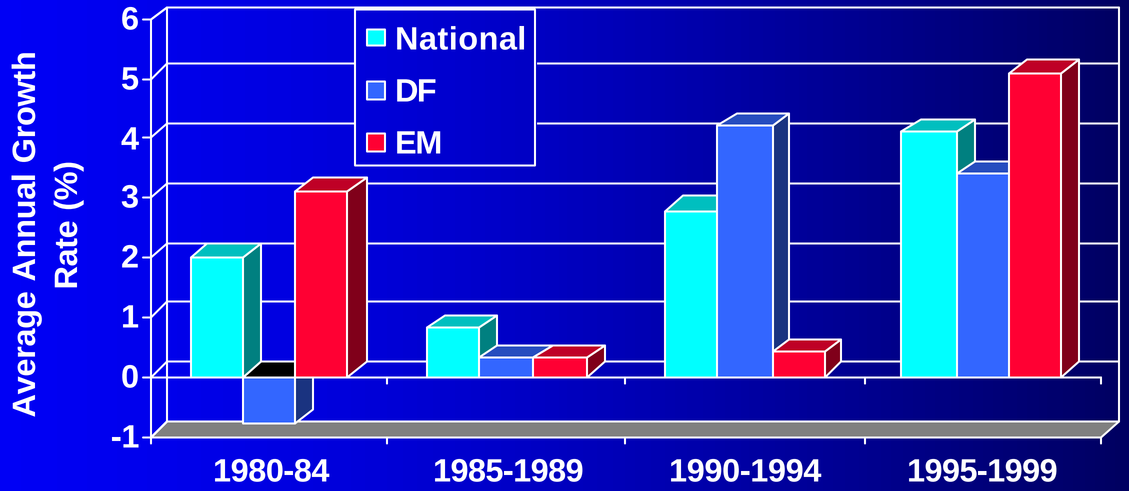
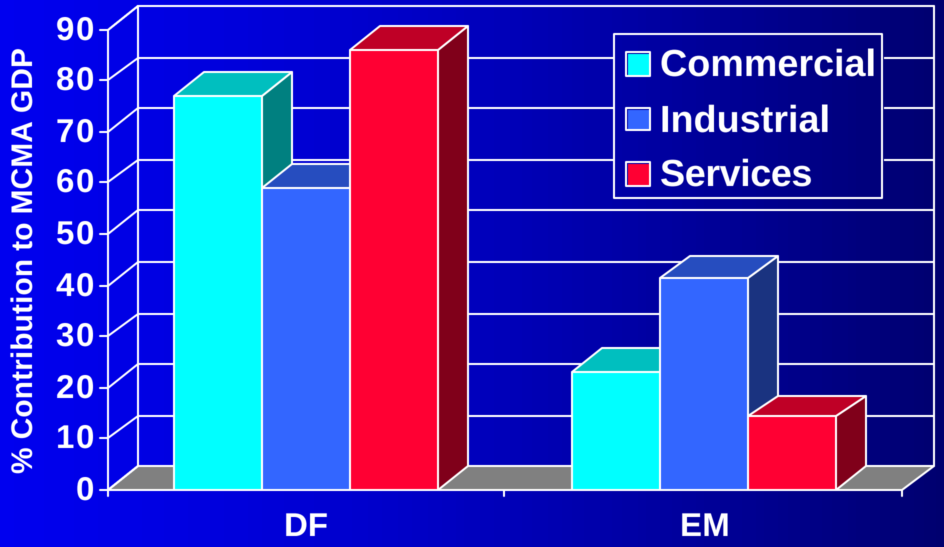
Economy

- MCMA as important, but declining, force in national economy
  - 38% of GDP in 1970; 33% of GDP in 1998
  - Most significant decline in Manufacturing
    - 47% to 29%
  - Relatively constant contribution of Financial Services (33%); Social Services (40-45%) and Construction (30-35%)
- In general, as goes the country, so goes the MCMA, but …



Intra-Municipal Economy

- EM expected to have higher economic growth rates in future
  - But, also, higher population growth
  - DF will, thus, likely maintain higher GDP/Capita
- As of 1993, Relative contribution to GRP:



MCMA Major Roads & Salient Characteristics

General Characteristics

- Concentration of suburban and interurban bus terminals (and main subway stations) in northern and eastern DF/EM boundaries
- Northern and Eastern roads primary means of access from suburban/exurban areas
- Existing airport on Eastern edge of DF (on Periferico) ~ 50,000 passenger trips/day

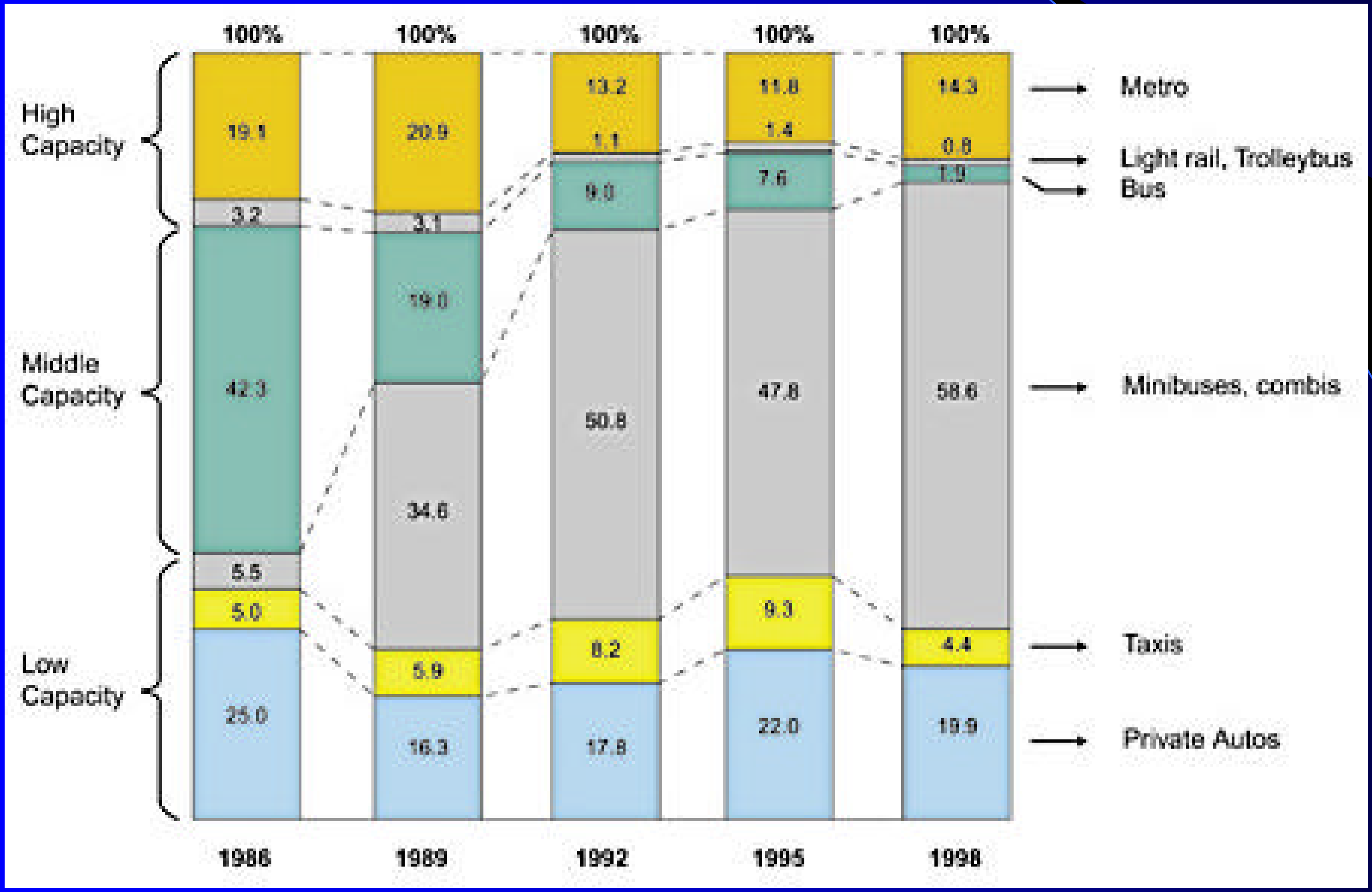
Passenger Travel Demand

- Data
  - Origin-destination surveys reportedly conducted in 1977/78, 1983 and 1994
  - 1994 survey done by the national statistics institute (INEGI) in cooperation with DF
  - Reportedly 29,700 households (~1%), using 135 traffic analysis zones (TAZs)
- 29.1 *vehicle* trip segments
  - 82% by public transport; 18% private transport
- Roughly 21 million vehicle *trips*
  - 75% public transport, 25% private transport
  - 1.2 per person or 5.4 per HH; Santiago 1.7/person 6.4/HH
- Does not include walking trips (10% in Buenos Aires, 20% in Santiago, 30% in Sao Paulo)
  - Conservatively (15%) adds 3.6 million trips – 1.4 per person or 6.4 per HH (Santiago – 2.12 per person or 8 per HH)
- Other estimates, significantly different
  - 19 million (1.35/person) in 1983 to 31 million (2/person) in 1994

Passenger Travel Demand – What Future?

- DF Transport authority (2000) predicts Region-wide change
  - 21 million trips 1994 (1.2 per capita)
    - 14 million in DF (1.6/capita); 7 million in EM (.8/capita)
  - 28 million in 2020 (1.08 per capita)
    - 17 million in DF (1.9/capita); 11 million in EM (.63/cap)
- How Realistic??
  - Data from Santiago 1977-1991
    - Elasticity of per capita trips to income: 1.87
    - Elasticity of auto trips to income: 1.69
    - Elasticity of public transport trips to income: -0.46
- What will the future really bring?

Passenger Travel Demand – What Future?

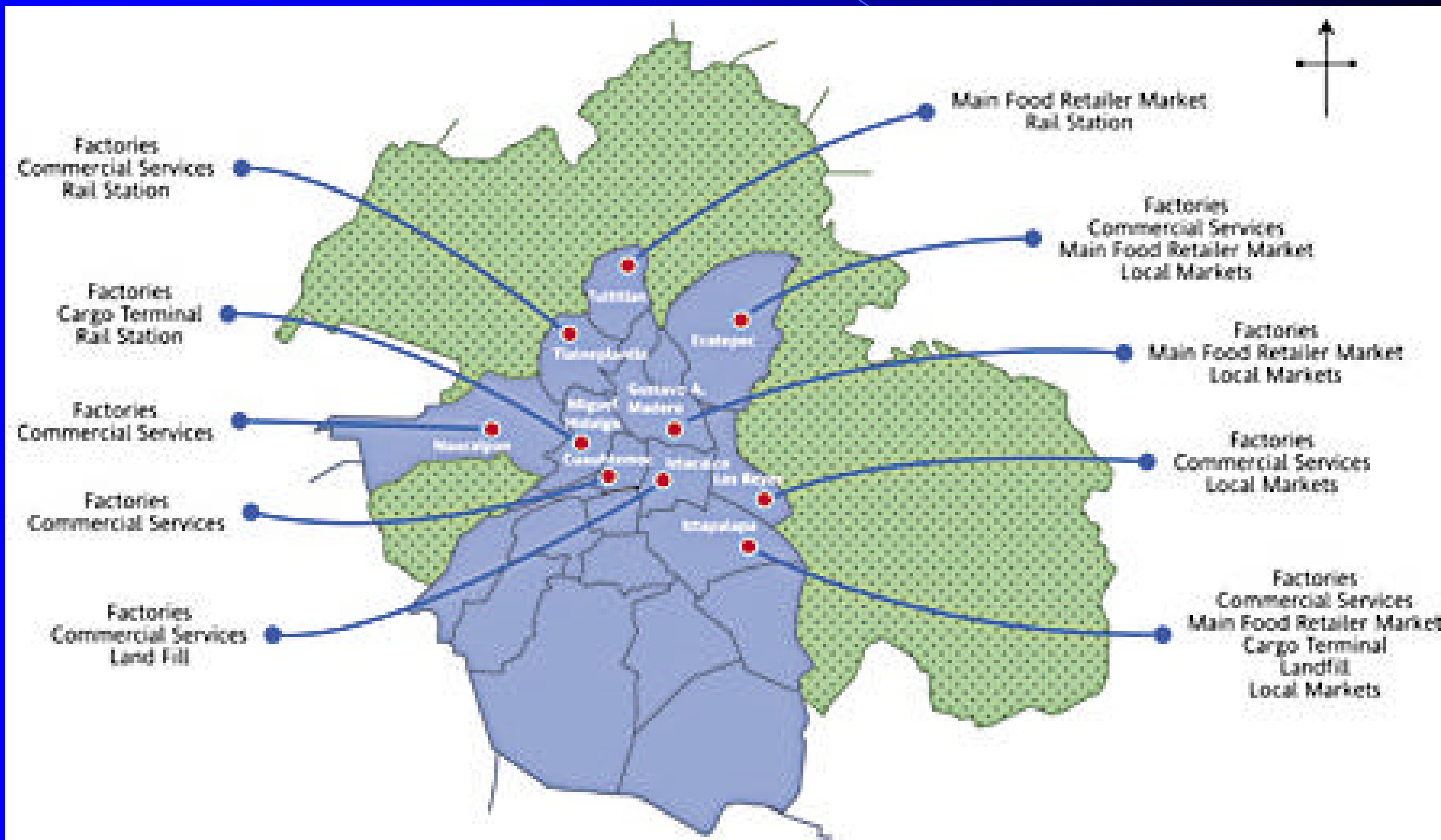


→ ?

Freight Demand

- Rail freight enters at two terminals in Northwest
- Truck through traffic major influence (lack of by-pass)
- Major freight terminal on southeastern boundary of DF; trucks heavier than 3.5 tonnes unload farm and agricultural products for delivery via lighter vehicles throughout the MCMA
- 29% of freight transported in MCMA originates in DF; 12% in EM; 59% outside MCMA

Major Freight Generators



Passenger Supply

- Private Autos
  - 2.3-3 million
  - 78 per 1000 pop. in 1976 to 135-166 per 1000 in 1996
  - 1.2 - 1.76 persons per vehicle
- Taxis
  - 69,000 – primarily in DF; no DF-EM inter-operation
- *Hoy No Circula*
- Buses, major decline since mid-1970s
  - 15,000 in 1976; today roughly 4,000 in DF
    - 1000 operated by state-owned RTP
    - Roughly 1,200 operated by private owned companies (former R-100 and more recent concession winners)
    - Estimated 1,800 introduced by *colectivo* organizations
  - "Suburban Services" in EM, uncertain number of vehicles
    - Some Metropolitan Routes, but generally "border transfer"
  - Marginal trolleybus service

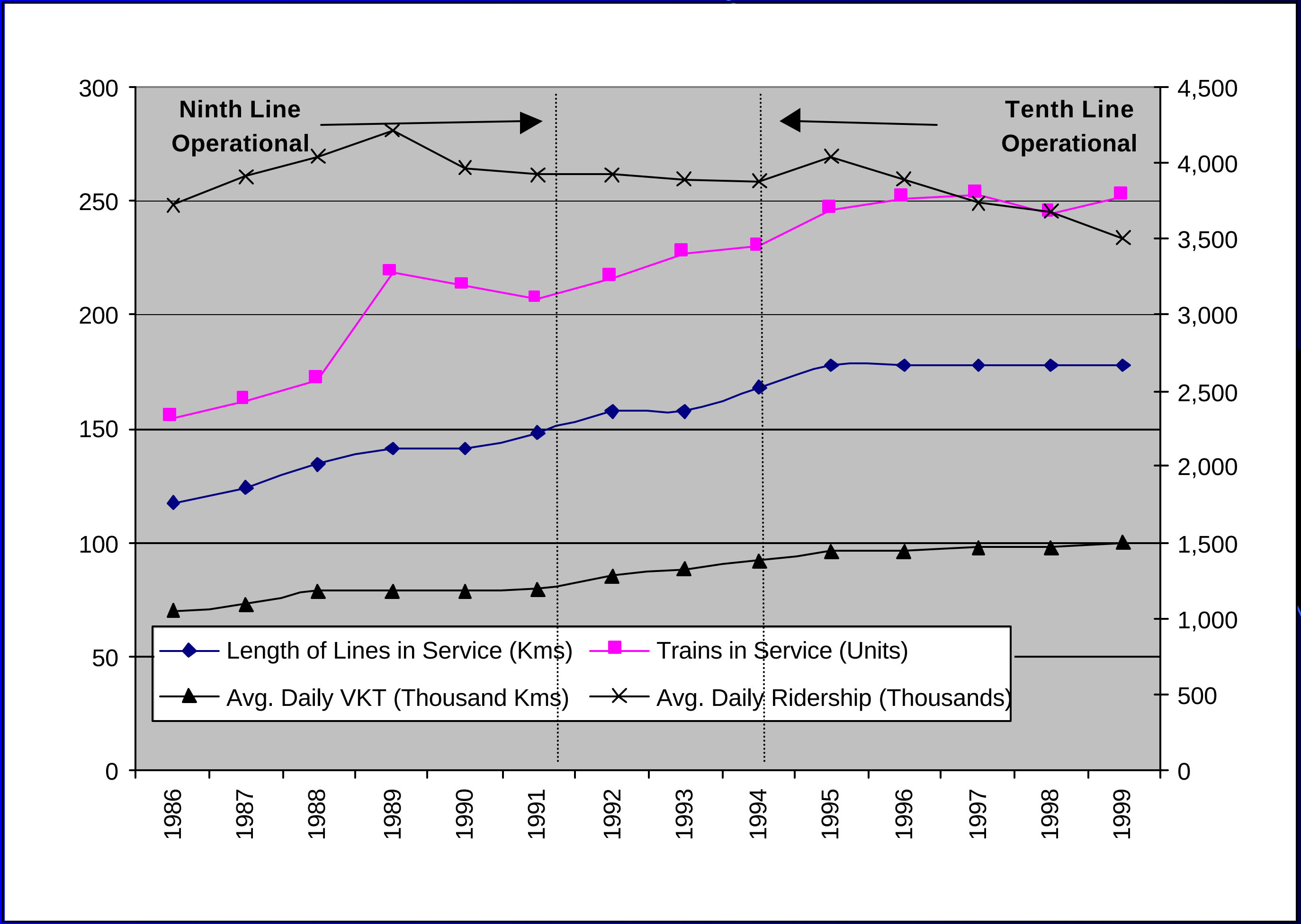
Passenger Supply

- The rise of the *Colectivo*
  - Originated as shared taxi sedans in 1950s
  - Tolerated "informally" until some formalization in the late 1960s
  - By early 1980s with government takeover of the bus system, *colectivos* thrived
    - Unregulated, "licensed" service
    - Owner-operator, in route association structure
  - DF: 103 *colectivo* organizations
    - ~27,000 vehicles
  - EM: 172 organizations, 94 companies
    - Probably similar, if not greater, number of vehicles

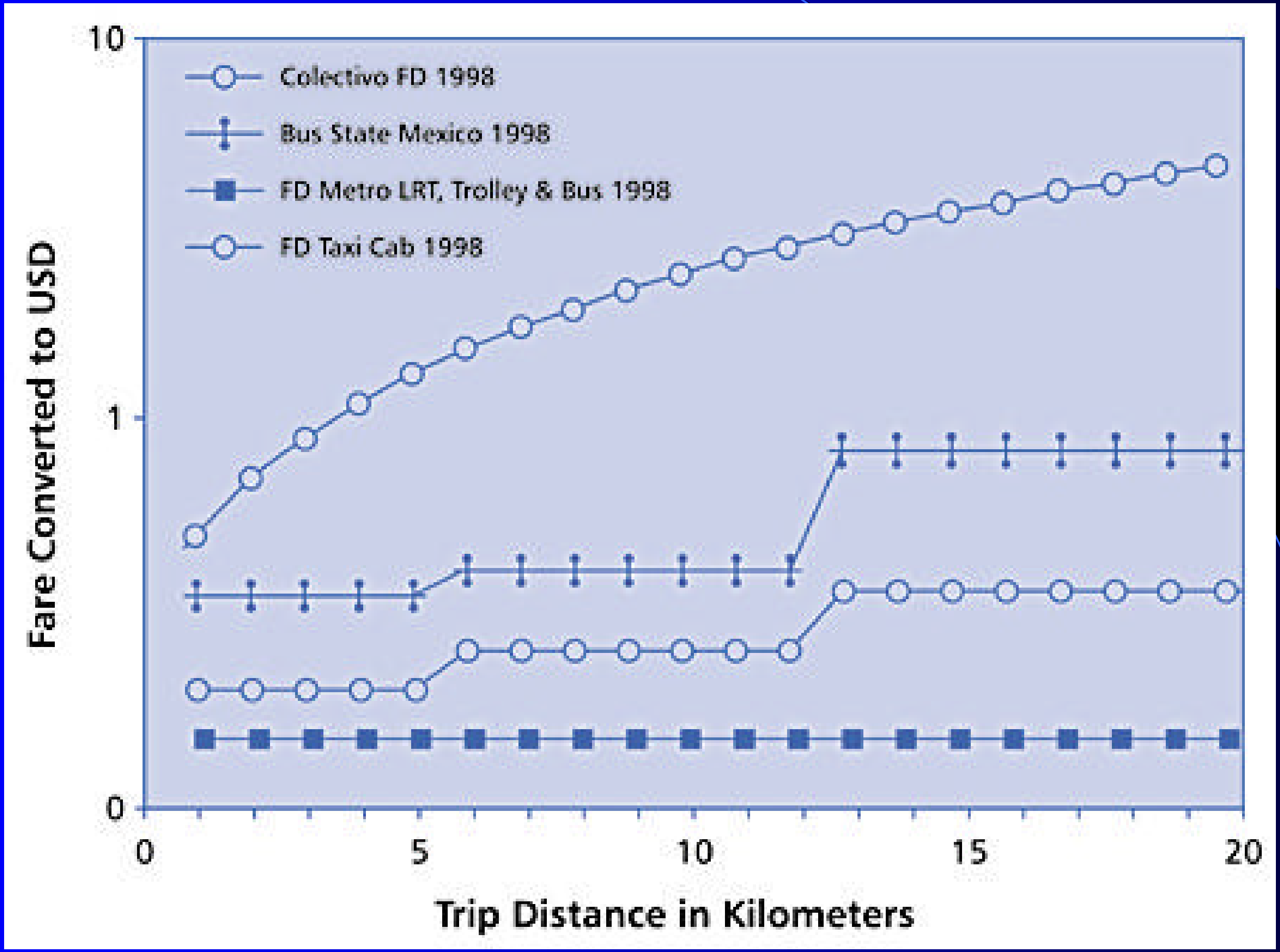
Passenger Supply – Metro & Light Rail

- First lines built in late 1960s
- 11 lines, 200 kms, 167 stations
- Original 3 lines carry 64% of passengers
- “Lowest Fares in the World”
- Fares cover approximately 40-50% of operating costs
- Service confined to DF
- Ability to “keep up” with urban expansion?
  - Exacerbating expansion?
- Realistic expansion plans?
- Light rail of 13 kms.

Metro Indicators



Public Transport Fares



Motor Vehicle Contribution to MCMA Pollutants

	PM_{10}[1]	SO2	CO	NOx	VOC[2]
Light Duty Private Vehicles[3]	5.2%	11.6%	62.2%	32.4%	23.4%
Colectivos	0.3%	0.9%	13.4%	5.1%	4.6%
Taxis	1.0%	2.5%	7.4%	5.4%	3.2%
Buses	5.9%	1.0%	0.5%	5.7%	0.8%
Trucks	23.4%	4.8%	14.4%	32.0%	7.5%
All Vehicles	**35.9%**	**20.8%**	**98.0%**	**80.5%**	**39.5%**

1. Does not include Road dust. 2. Does not include refueling. 3. Includes pick ups, motorcycles, diesel vehicles under 3 tonnes.

Source: CAM, 2001.

Next Time

- Regional Architecture
- Some Responses
- Looking to the Future