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Measures to Increase Urban Transport Affordability: Case Study of Madrid

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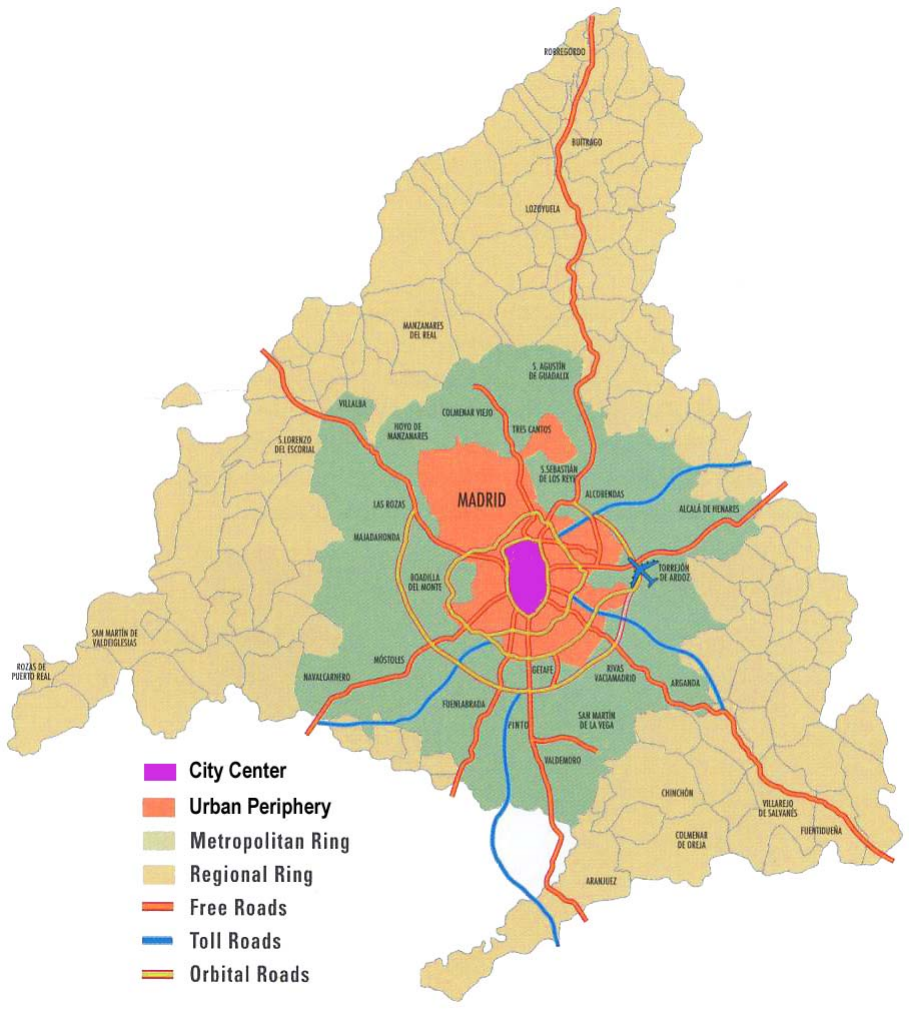
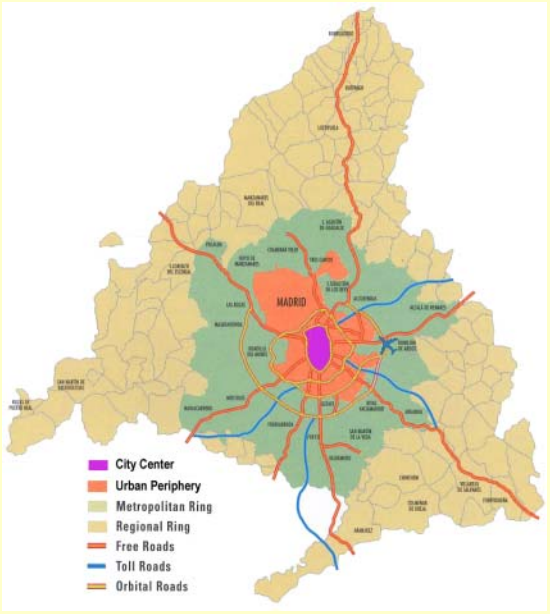
The Region of Madrid (I)



REGION OF MADRID	
Surface	8,027 Km^2
Population	5,826,272
Density of Population	725,8 inh/Km^2
Income per capita	€25,978 $33,771

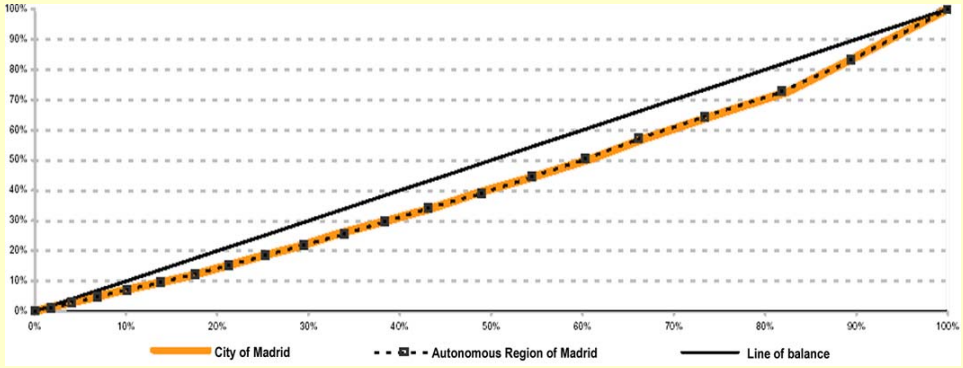
The Region of Madrid (II)

	Surface (km2)	Jobs	Population	% of population	Δpopulation 96/04
City Center	71,6	959,877	1,018,732	17.5%	11.3%
Urban Periphery	535	815,648	2,116,513	36.3%	8.45%
Metropolitan Ring	2,280	893,982	2,348,884	40.3%	22.73%
Regional Ring	5,141	93,561	342,143	5.9%	41.6%
TOTAL	8,027.6	2,033,068	5,826,272		



The Region of Madrid (III)

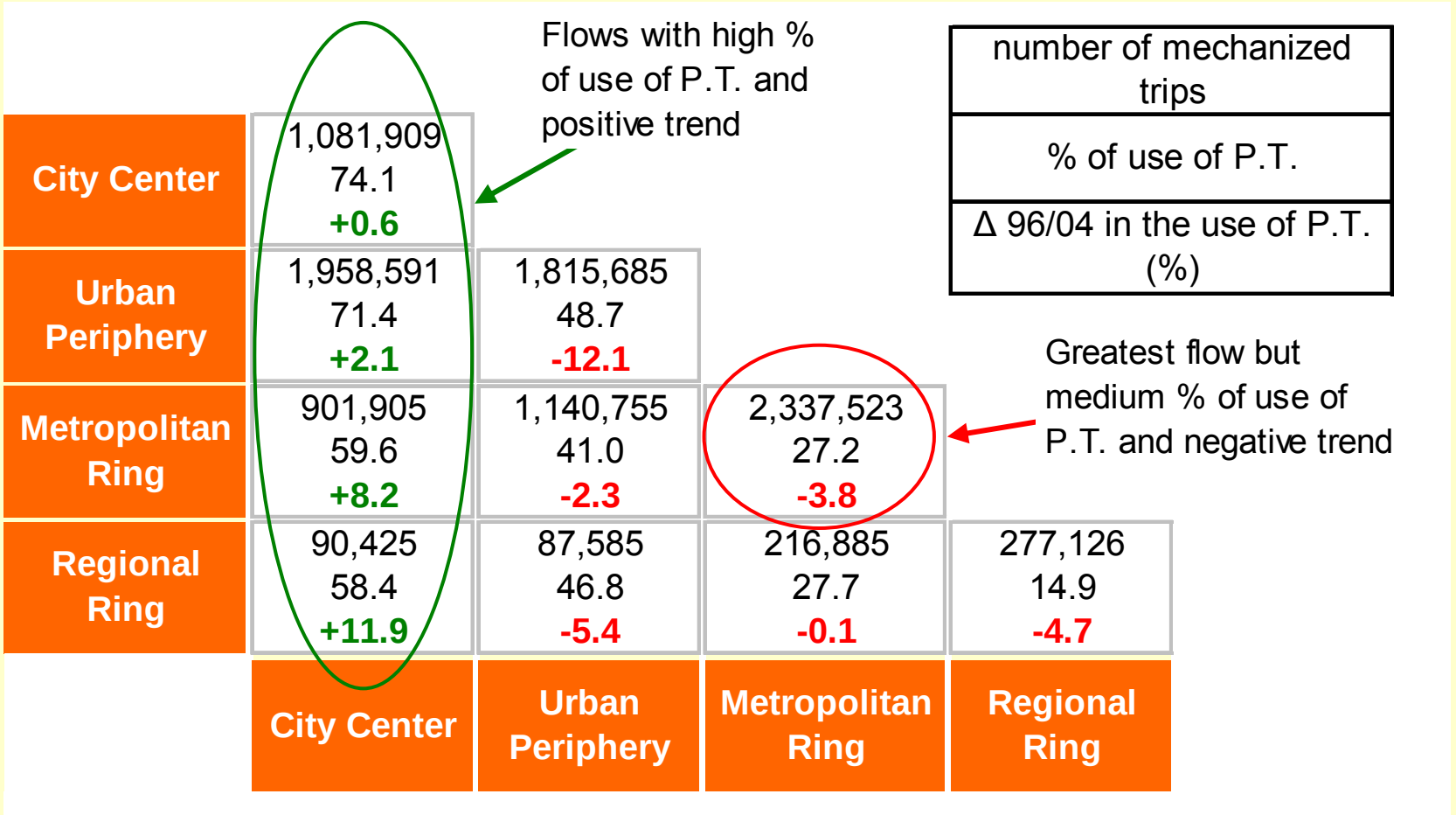
Madrid's wealth distribution is quite uniform (Gini Index = 16%)



monthly income	inhabitants	% of expenditure in food	% of expenditure in urban p.t.
< 500€	187.662	16,09%	0,95%
500€ - 1000€	890.371	16,85%	1,07%
1,000€ - 1,499€	1.493.780	17,31%	**1,01%**
1,500€ - 1,999€	1.269.356	14,66%	**1,06%**
2,000€ - 2,499€	632.309	14,47%	1,54%
2,500€ - 2,999€	416.801	12,57%	0,95%
3,000€ - 4,999€	601.772	11,36%	0,87%
>5,000€*	123.522	10,49%	0,69%
Total	5.615.574		

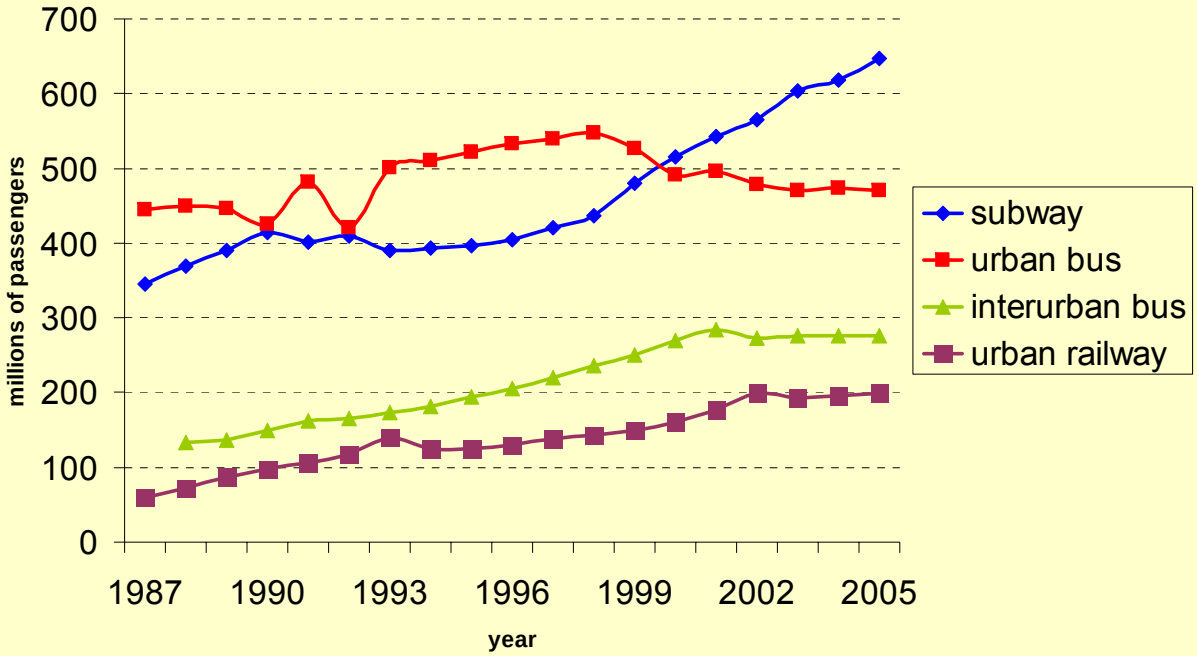
49% of population

Mobility Trends in Madrid (I)

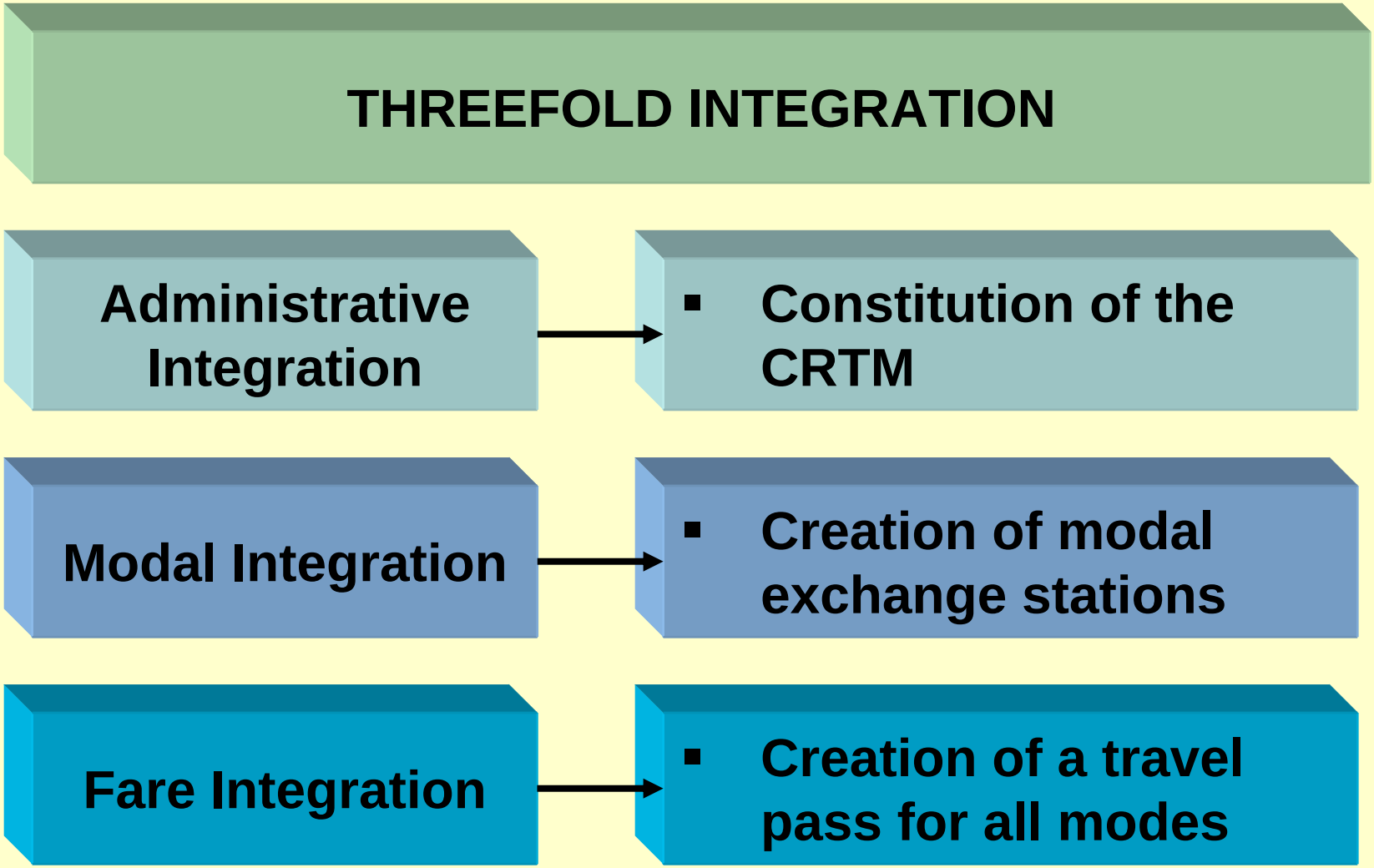


Mobility Trends in Madrid (II)

mode	Travellers (millions)	trips-km (millions)
Subway	647.0	4,522.5
Urban Bus	470.2	1,819.7
Interurban Bus	275.6	4,147.8
Urban Railway	199.0	3,862.6
Total	1,591.8	14,352.6

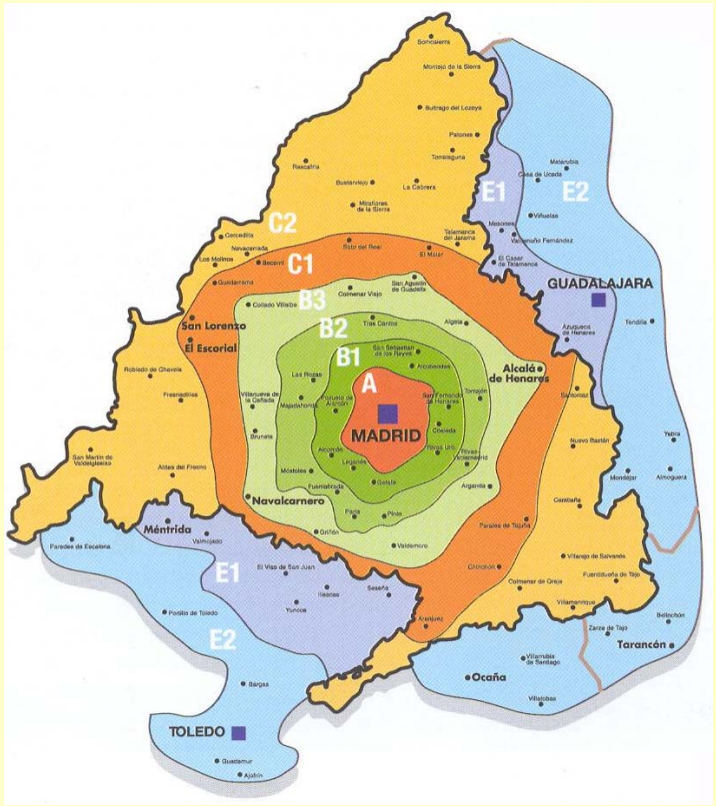


Key elements of Public Transport in Madrid (I)

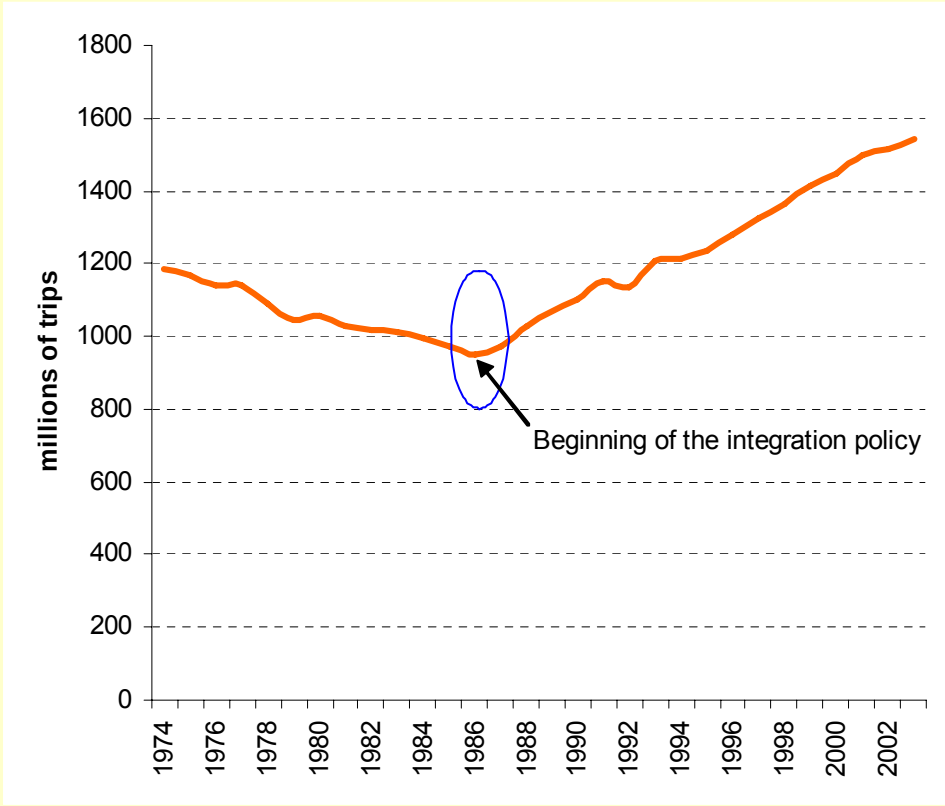


Key elements of Public Transport in Madrid (II)

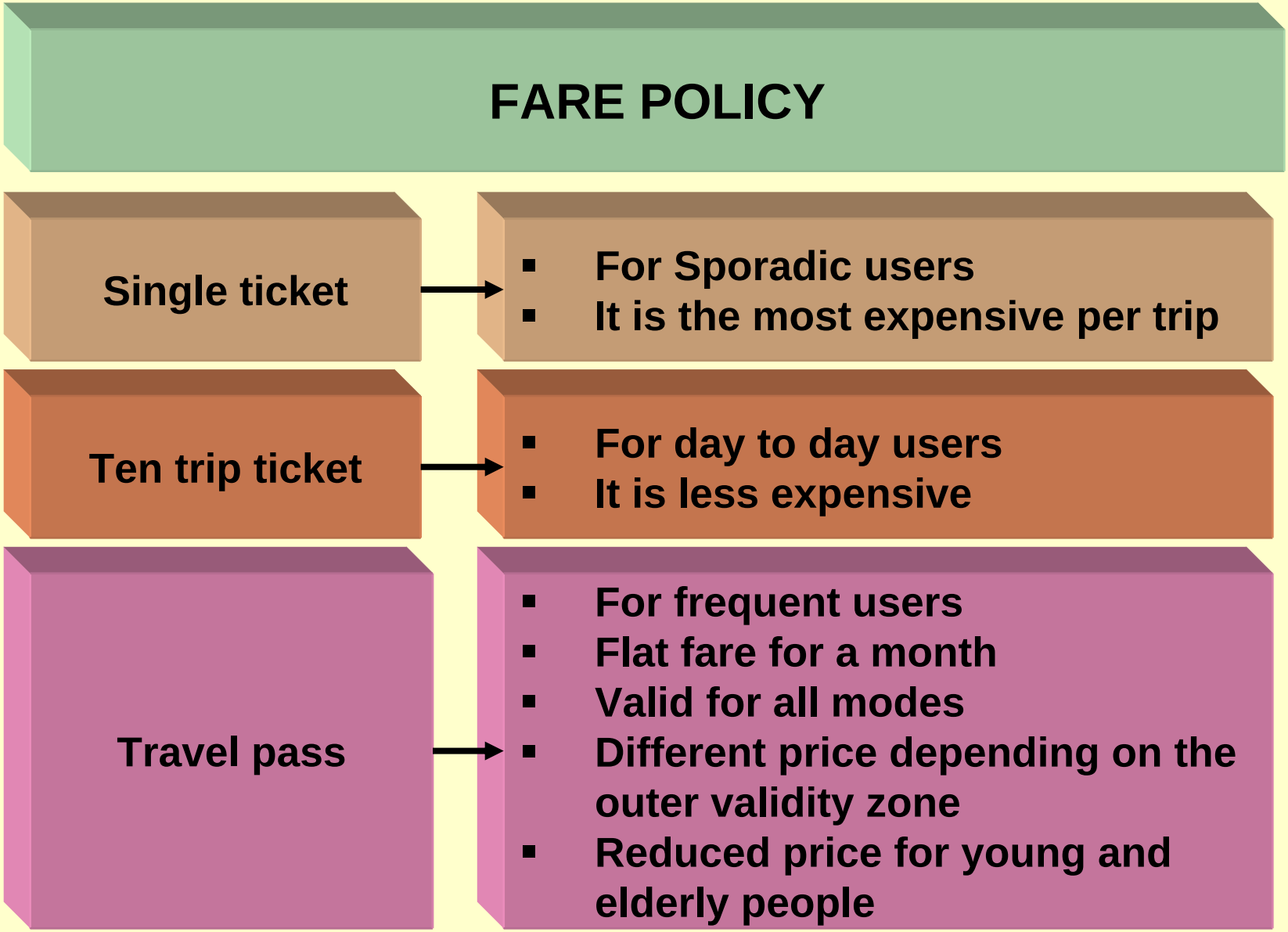
Travel pass zones



Effects of the integration

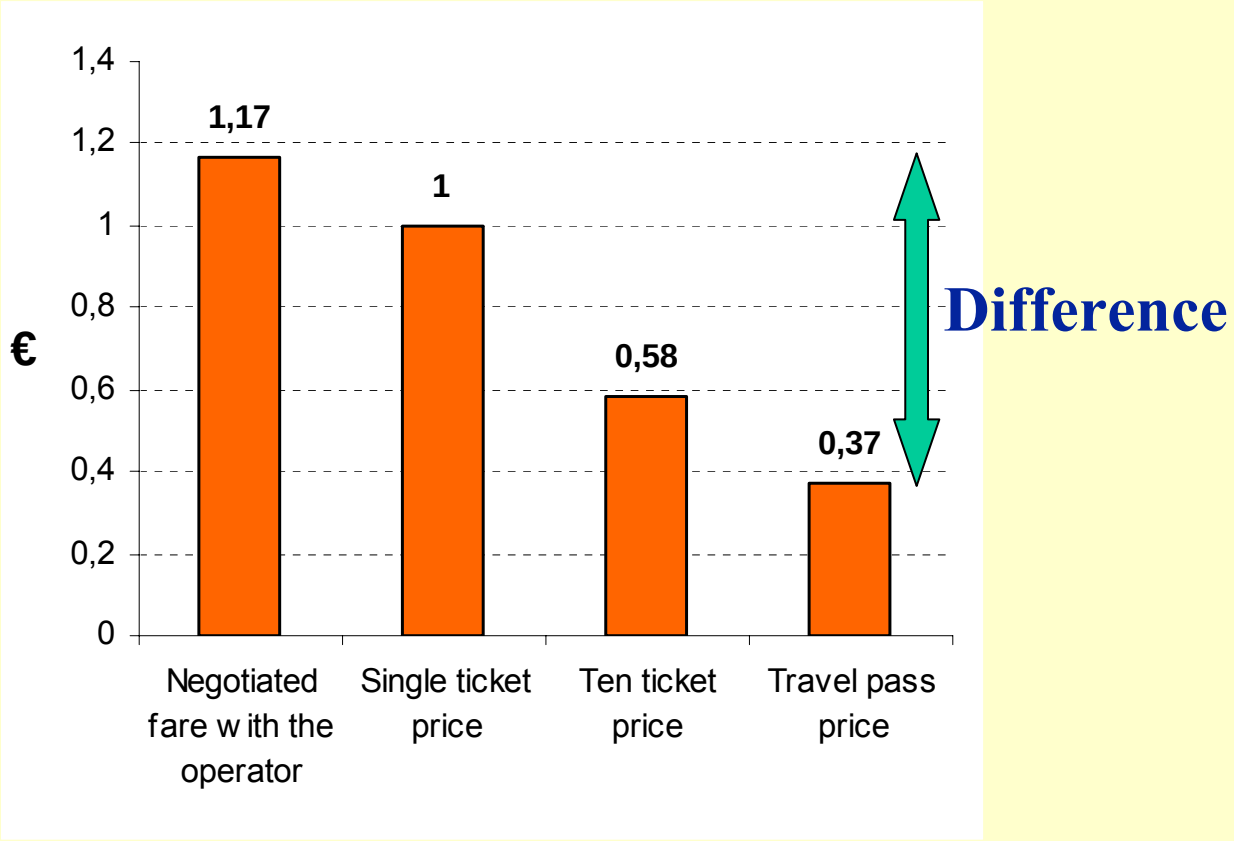


Key elements of Public Transport in Madrid (III)



Public Transportation Subsidies (I)

Comparative analysis of fare prices versus transportation costs in Madrid

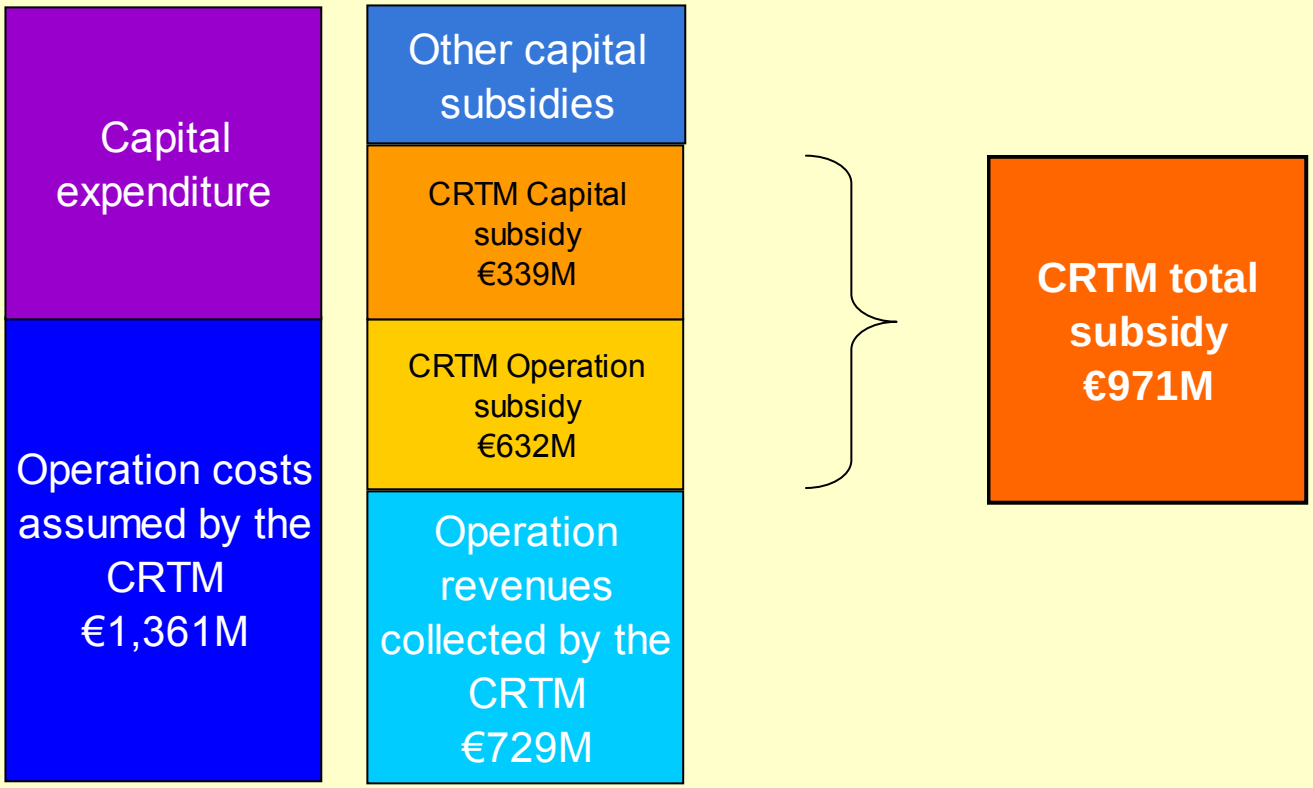


Public Transportation Subsidies (II)

- Public transportation in Madrid is highly subsidized
- Coverage Ratio = Revenues / Costs
  - Madrid Transportation system = 43%
  - Metro = 31 %
  - Urban buses = 62%
- Costs include:
  - Operation cost
  - Part of infrastructure costs
- Reasons for implementing subsidy policy
  - Reducing negative externalities of private cars (congestion, pollution, …)
  - Pursue affordability for low income population

Public Transportation Subsidies (III)

CRTM subsidy approach in 2005



Affordability Issues (I)

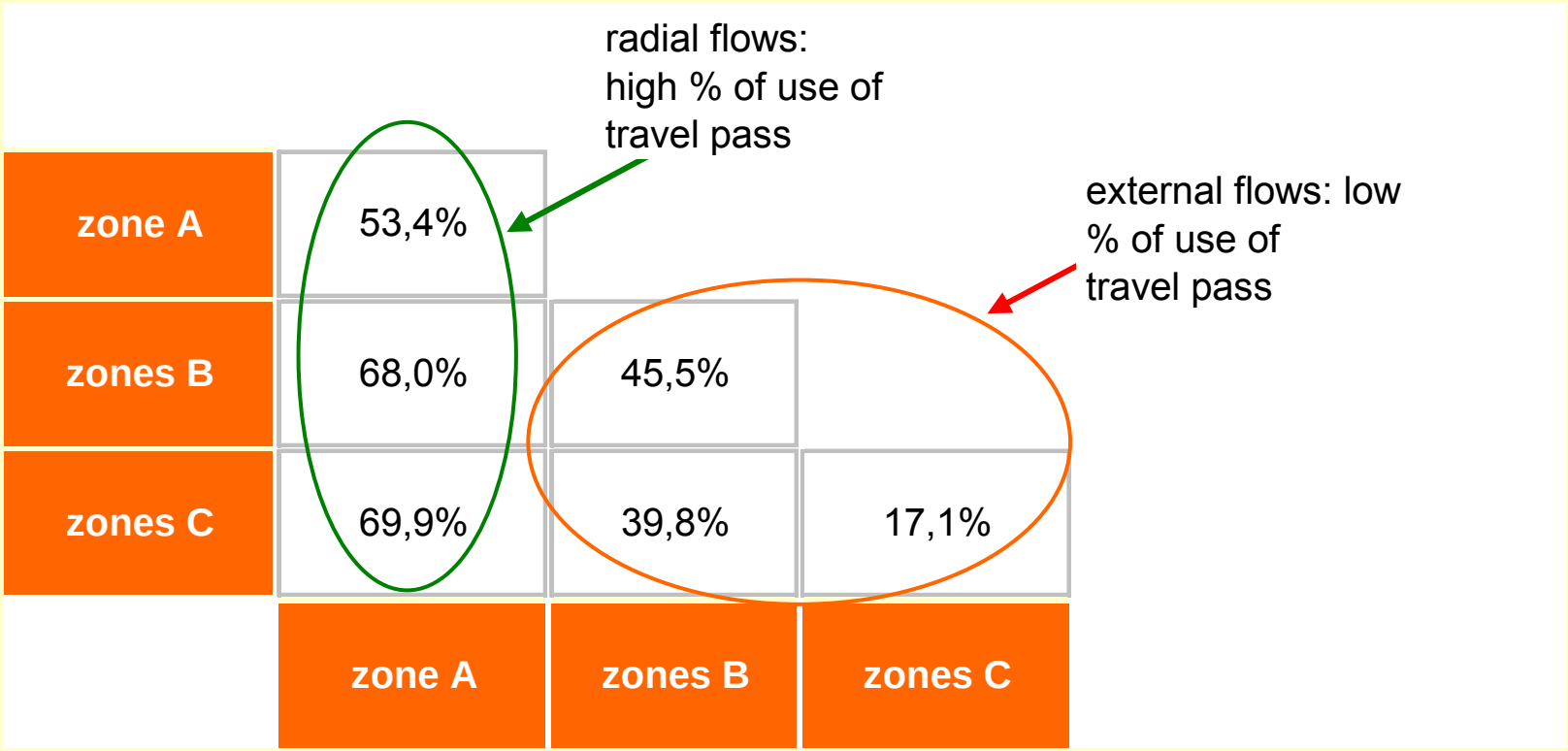
Public transportation expenses are not relevant for households in Madrid

quintile	average of mensual income	% of expenditure in food	% of expenditure in urban p.t.
quintile 1	< 1,250€	16.74%	1.05%
quintile 2	1,250 €	17.31%	1.01%
quintile 3	1,600 €	15.43%	1.05%
quintile 4	2,050 €	14.52%	1.33%
quintile 5*	> 2,050€	11.70%	0.88%

**the results for this level of income have little representativeness*

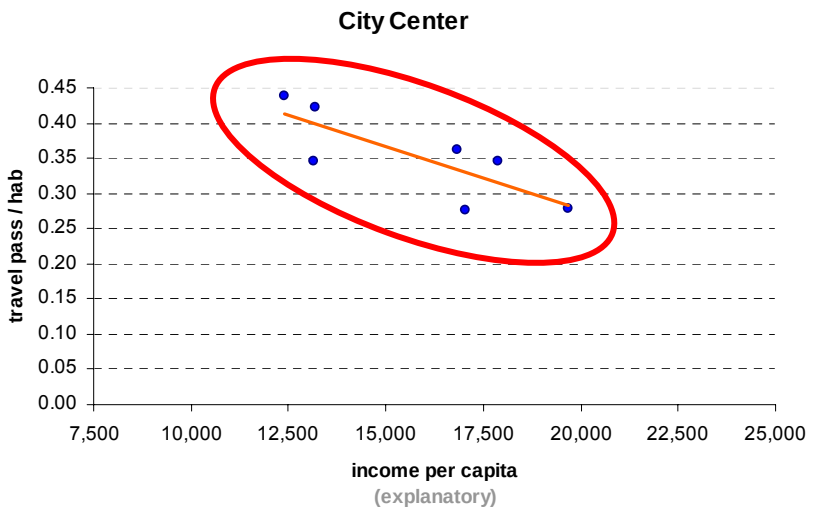
Affordability Issues (II)

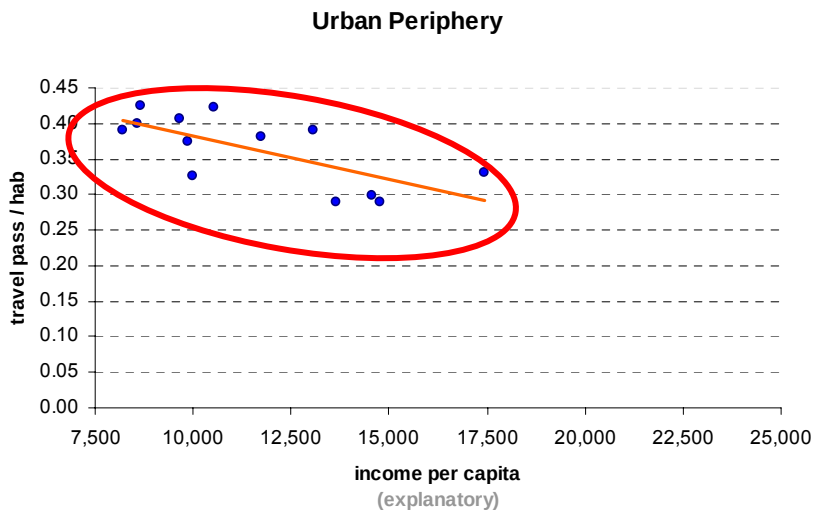
Travel pass trips / Public Transportation trips per origin-destination zone

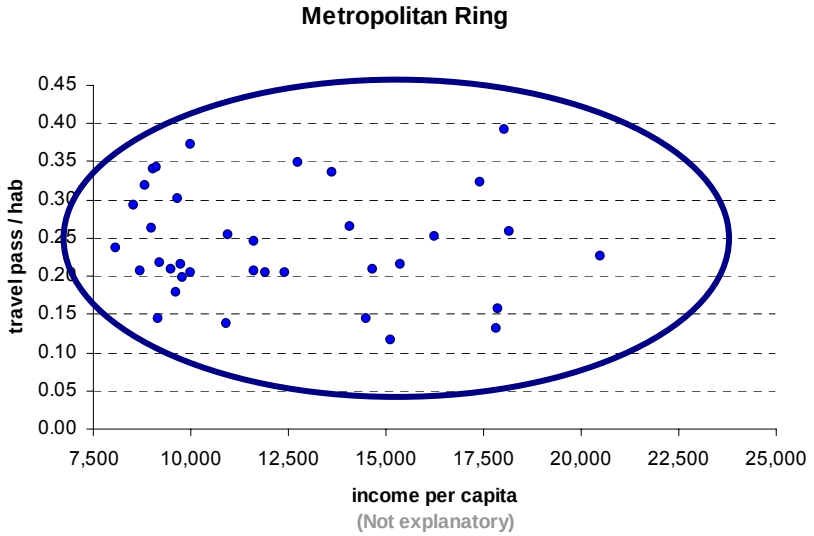


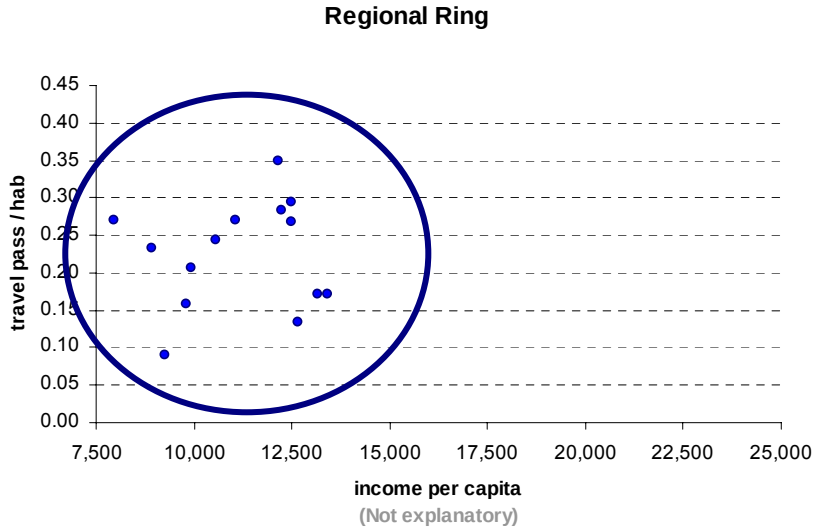
Affordability Issues (III)

Relationship between travel pass use and income level per zone



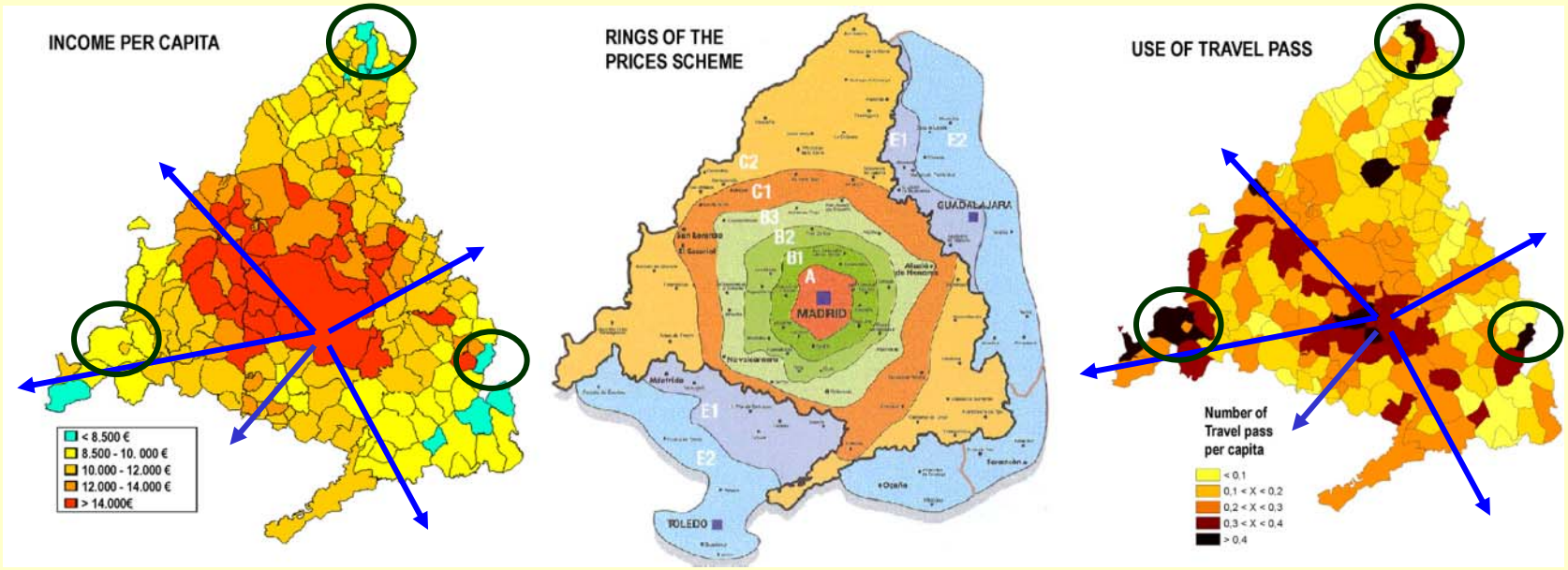






Affordability Issues (IV)

Comparison of income level and travel pass use in Madrid´s Municipalities and Districts



Conclusions (I)

- Public transport subsidies **do not have affordability as their main objective** in Madrid
- The **main objective** of public transport subsidies is to increase social welfare by **reducing private car negative externalities**
- The promotion of fare, administrative, and modal **integration** is a **key policy** instrument to foster public transportation use
- The creation of a **"monthly flat fare"** has contributed to **increase both efficiency and equity** in Madrid

Conclusions (II)

- The use of **travel pass is not necessarily linked to income per capita**
- **Price discrimination** could be used in a more reasonable way to raise more funding from **sporadic users**
- **Geographical-based pricing** could improve targeting of low income users
- Mobility surveys in Madrid should **gather better information** about benefits of subsidies on transportation users

Further information:

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