



EMTA BAROMETER OF PUBLIC TRANSPORT IN THE EUROPEAN METROPOLITAN AREAS

EMTA barometer

European Metropolitan Transport Authorities

2011

Foreword

The association of European Metropolitan Transport Authorities (EMTA) brings together the public authorities responsible for planning, co-ordinating and funding the public transport systems of 28 of the European largest metropolitan areas and Montreal (Canada).

A thorough knowledge of reality is a prerequisite to define pertinent policies. Decisions on public transport affect the daily lives of millions of people, the investment and operation costs of complex system often amount to millions of euros if not billions and have a determinant impact on the economic dynamism and environmental quality of urban areas.

In this context, **comparison of data between territories facing the same kind of challenges (benchmarking) is a useful source of information for decision makers.** The EMTA Barometer of public transport in the European metropolitan areas aims to provide such comparative insight.

Where they exist, **public transport authorities are the organisations pre-eminently designed to develop a broader view on mobility in large urban contexts.** Metropolitan areas have multi-modal and multi-operator public transport networks. Besides, gathering data on mobility patterns and passenger perception is instrumental to their knowledge. Data collection shall therefore be a key responsibility of public transport authorities.

Public transport authorities are the only organisations with a broad view on mobility issues in large urban contexts

To achieve this end, it is important to:

- > **define pertinent territories**, corresponding to the reality of mobility of people. Analysis should capture the reality of the territory where people do travel beyond administrative boundaries of local authorities or transport companies;
- > **determine a set of key indicators** that shall be collected and reviewed regularly so as to have a clear view of the main trends under way;
- > **take into account not only public transport, but also mobility in a broader sense**, including trips involving private cars, but also taxis, bicycle, and walking.

The well known difficulties and biases of collecting data call for a process of harmonization of definition at European level according to the Action Plan on Urban Mobility (European Commission, 2009). In the meantime, EMTA continues to collect data from the transport authorities of the European largest cities. The present leaflet gathers key findings from 2011 data*.

Changes over the previous edition - "Barometer 2009" - show:

- > Populations tend to densify in the metropolitan areas, at the same time several transport authorities enlarge their territorial scope (metropolitan areas of Hamburg, Helsinki and Seville);
- > the modal share in favour of public transport is still high in the main cities (30%), and soft modes such as walking and cycling show a tendency to increase (38%), shifting from private car (32%) and public transport;
- > the demand for public transport is above one trip per inhabitant every working day, although in several metropolitan areas a decrease has been noticed due to the economic crisis;
- > Resources from fare revenues in 2011 amount on average to 45.9% of the operational costs across the metropolitan areas surveyed whereas the public subsidies amount to 45.8%. This shows a stable situation compared to 2009.

The Barometer is produced by CRTM Madrid.



* This EMTA Barometer 2011 leaflet has been published in December 2012. It is also downloadable available from www.emta.com in the publication section.



> **25 areas are listed in this leaflet**, which means a record in participation since the first issue of this publication (24 cities in 2009). Hamburg has been included in this edition.

Description of the metropolitan areas surveyed

	Authority responsible	Population PTA 2011 (inhabitants)	PTA* area surface (km ²)	Urbanised surface (km ²)	Density (inhabitants/km ²)	Annual GDP per capita (€)	Population main city 2011 (inhabitants)
Stadsregio Amsterdam	Stadsregio	1,424,137	1,003	517	1,420	30,600	780,559
Barcelona Metropolitan Region	ATM	5,029,000	3,239	597	1,553	26,850	1,615,000
Berlin-Brandenburg	VBB	5,997,507	30,372	3,343	197	26,094	3,501,872
West Midlands (Birmingham)	Centro	2,738,100	901	435	3,039	19,578	1,073,000
Brussels Metropolitan	MRBC	3,234,475	4,300	1,200	752	39,000	1,119,088
Central Hungarian Region (Budapest)	BKK	2,079,331	1,226	na	1,696	16,559	1,733,685
⁽¹⁾ Cadiz Bay	CMTBC	707,245	2,898	80	244	na	126,766
Greater Copenhagen	Movia	2,491,090	9,133	1,973	273	43,856	649,265
Hamburg	HVV	3,405,000	8,700	na	391	50,300	1,799,000
Helsinki	HSL	1,131,372	1,167	na	969	52,452	583,350
Greater London	TfL	8,174,000	1,579	1,042	5,177	35,326	8,174,000
Lyon Urban Community	SYTRAL	1,277,777	515	211	2,481	na	480,000
Madrid Community	CRTM	6,489,680	8,026	1,037	809	30,345	3,265,038
Greater Montreal	AMT	3,777,499	3,980	na	949	29,875	1,886,481
Paris Ile-de-France	STIF	11,866,900	12,012	2,534	988	48,378	2,246,995
Middle Bohemia Region (Prague)	ROPID	1,831,255	3,860	na	474	20,698	1,262,106
Metropolitan Area of Seville	CTAS	1,457,428	4,221	337	345	17,405	703,021
South Yorkshire (Sheffield)	SYPT	1,343,600	1,552	326	866	17,329	552,700
County of Stockholm	SL	2,091,473	6,526	na	320	na	864,324
Stuttgart Region	VRS	2,439,664	3,012	715	810	35,865	613,392
Turin Metropolitan Area	AMMT	1,556,805	837	246	1,860	20,626	907,563
Valencia Metropolitan Area	aVMM	1,800,614	1,415	325	1,273	21,462	798,033
VOR Region (Vienna)	VOR	2,813,000	8,441	na	333	35,710	1,730,000
Vilnius	MESP	838,852	9,731	449	86	12,521	554,060
Warsaw	ZTM	2,435,350	2,424	na	1,005	16,274	1,720,398

*PTA: Public Transport Authority.

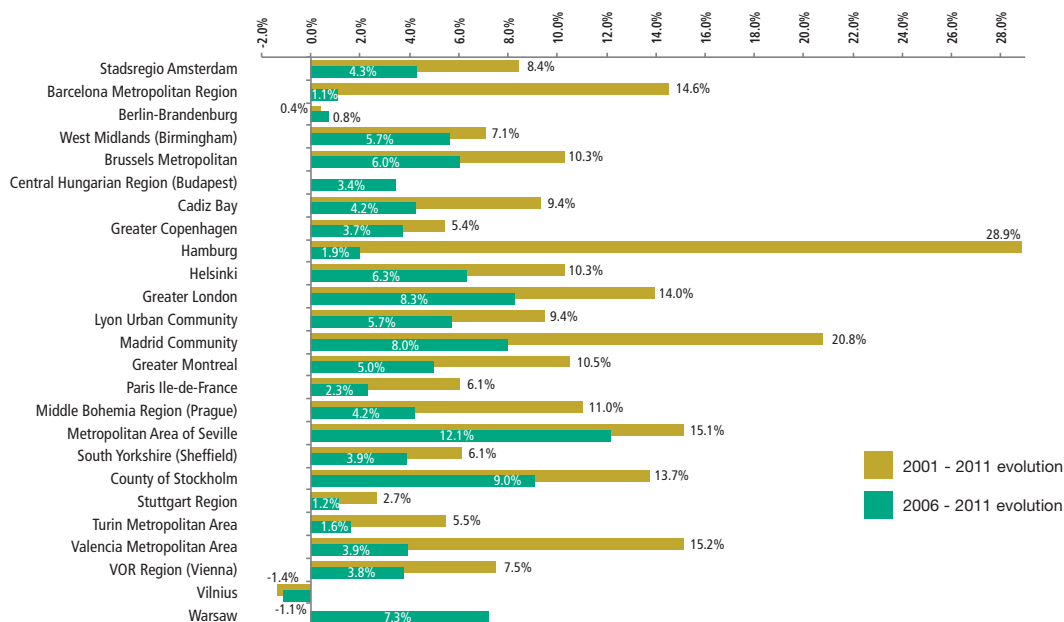
⁽¹⁾ 2009 figures in the whole report

> European metropolitan areas keep growing but have various demographic structures

Most urban areas surveyed have seen an increase of their population over the past ten years 2001-2011. The average growth rate is around 10% for the cities that have provided data. Spanish metropolitan areas such as Madrid Community, Valencia Metropolitan Area, Barcelona Metropolitan Region, Metropolitan Area of Seville enjoyed a growth over 13% along with Greater London and County of Stockholm whilst other metropolitan areas scored under 7% (Greater Copenhagen, Paris Ile-de-France, South Yorkshire Sheffield and Turin Metropolitan Area). Only Vilnius has a very slight decrease in population (-1.4%) over the last 10 year period.

The weight of the main city within the whole metropolitan area is roughly a 49% of total population with large differences illustrating the diverse administrative frameworks and histories of the cities.

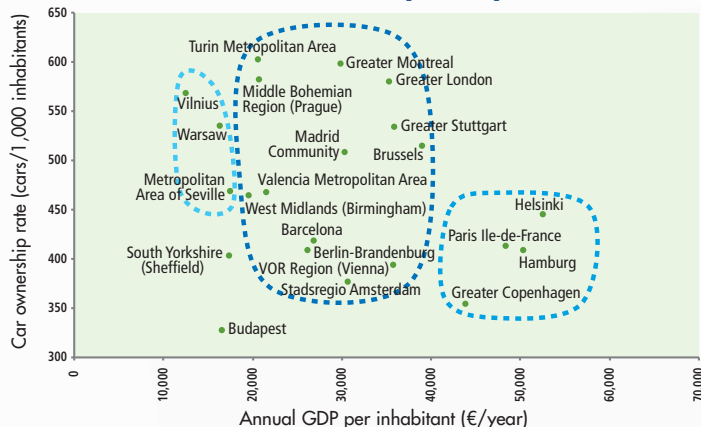
Evolution of Population: decade 2001-2011 compared to 5 years span 2006-2011



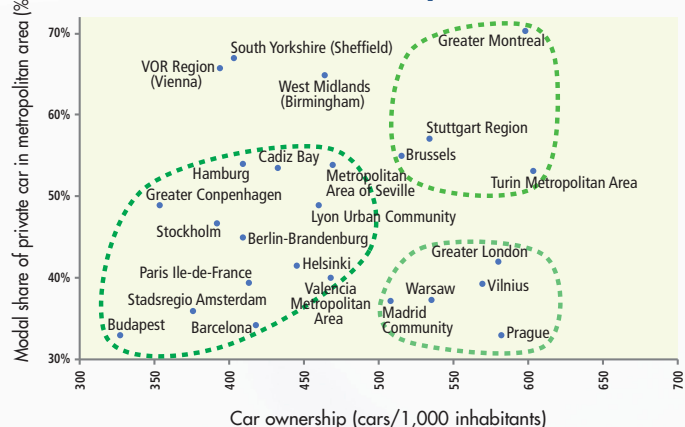
> **Car ownership rates are twice as high in some cities as in others** (603 cars per 1,000 inhabitants in Turin vs 327 in Budapest and 354 in Copenhagen). Different groups can be observed and it seems that several wealthy metropolitan areas have a relatively low car ownership ratio (under 450 cars/1,000 inhabitants), and lower use of private car. In other words, public transport authorities have growing responsibilities in the metropolitan areas to offer attractive public transport services to a less car dependant community.



Car ownership rate versus annual GDP per capita



Modal share of private car versus car ownership rate



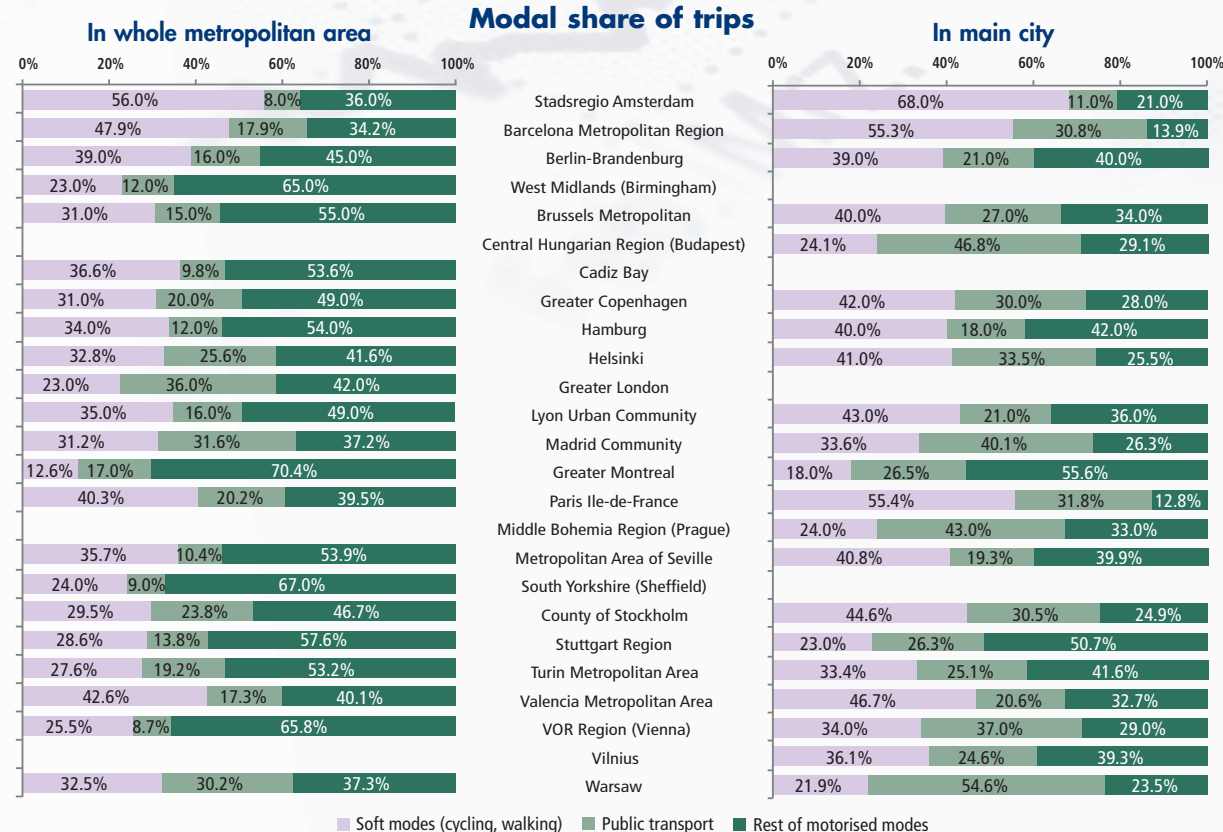
Other factors like urban density, family size, existence of efficient public transport systems, or the cost of using and parking of cars can lead to lower car ownership rates.

> **Public transport accounts for more than 30% of all trips (48% considering only motorised trips) in the densest parts of most European metropolitan areas (in the main cities)**, illustrating its fundamental economic, social and environmental role in large urban territories. Soft modes (walking and cycling) account for 38% and the motorised modes (mainly private car) for 32%. Compared to 2009, figures show that a light shift from private car and public transport has occurred in favour of soft modes.

Most of the **main cities** achieve more than 60% of modal share for what we can consider as “sustainable mobility” (as sum of public transport and soft modes). Amsterdam, Barcelona, Budapest, Copenhagen, Helsinki, Madrid, Paris, Stockholm, Vienna and Warsaw stand out with a rate over 70%, illustrating the very dense public transport systems irrigating the heart of those capital cities, and the deep-rooted habit of walking and/or biking in the European cities.

The **metropolitan areas** of these cities mentioned above together with Greater London, Berlin-Brandenburg and Valencia have a clear predominance of sustainable modes over the private car. Greater London, Madrid Community and Warsaw are the metropolitan areas among those surveyed, where public transport accounts for the highest modal shares of all trips (between 36% and 30%).

There is a gap between modal share in the main city and modal share in the whole metropolitan area where public transport accounts, in average, for 18% of all trips (27% considering only motorised trips). This figure rather stable as monitored over the past years, embodies one of the main challenges facing public transport authorities and operating companies in the coming years: developing public transport in the suburbs and the less dense parts of the metropolitan areas.

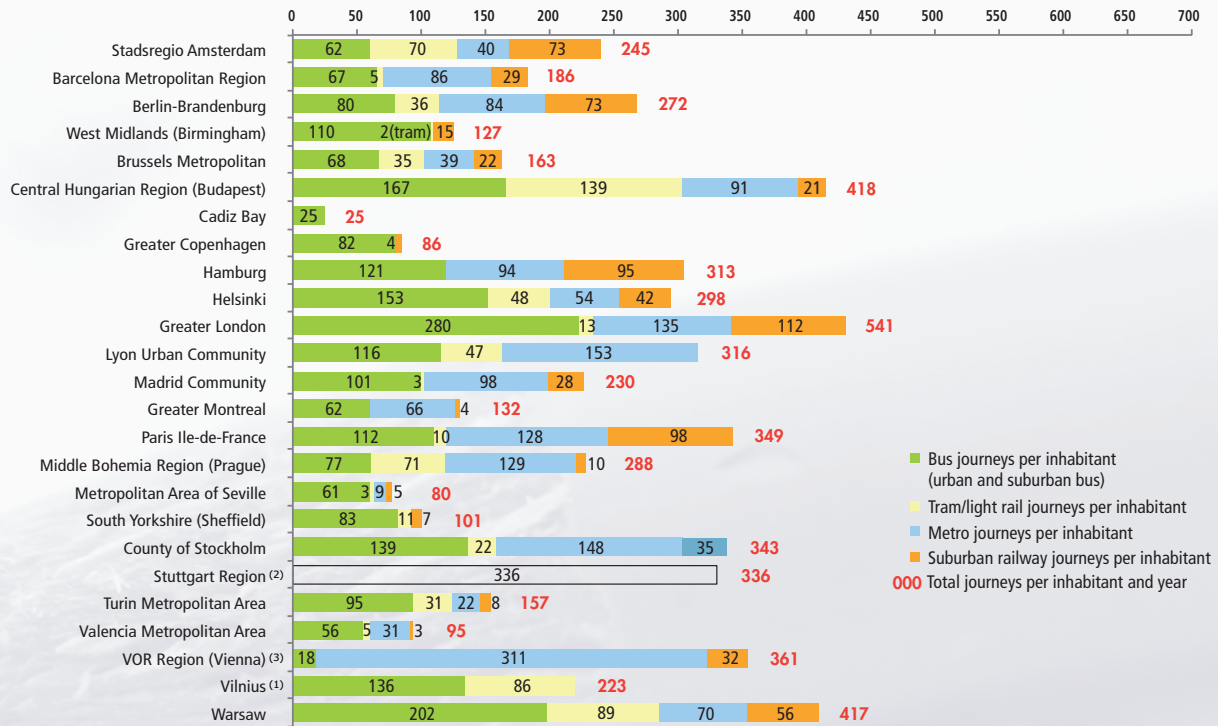




> Regarding the public transport demand, each inhabitant does more than 244 journeys (vs 240 in 2009) per year on public transport, more than one trip every working day. In some cases the total demand is over 400 journeys as in Budapest, Greater London and Warsaw. In half of the metropolitan areas, the share of the bus mode is still dominant.

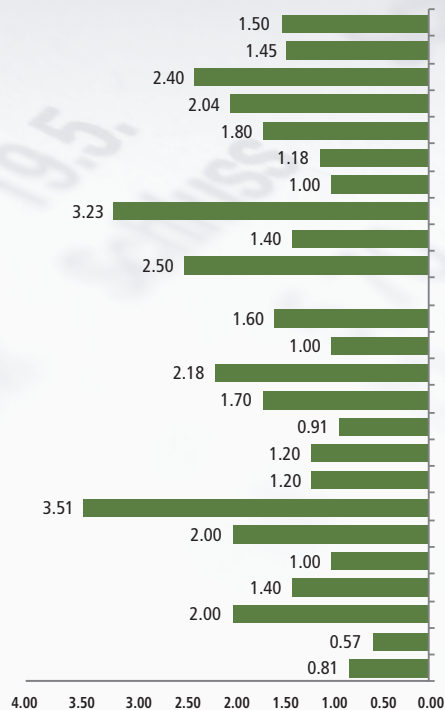
Over the years the increase in public transport demand reflects the effort being made by authorities and operators to offer a high quality public transport system, with accessible vehicles and stations, using ITS (Intelligent Transport System) technologies to guarantee reliability and safety in the operation, and real time information and contactless tickets to the user to promote the public transport use and make it more competitive compared to the private vehicle.

Public transport demand per inhabitant (Journeys in PT per mode and inhabitant in 2011)

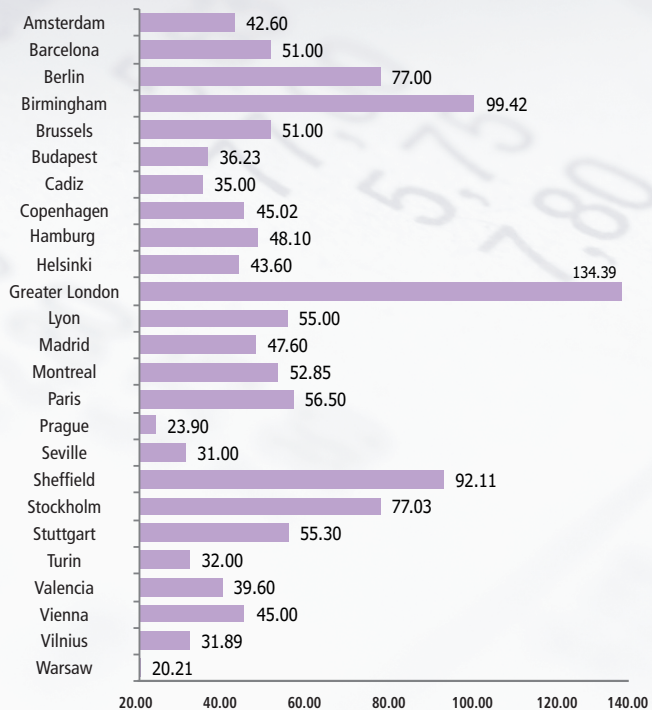


> Fare policies and fare levels differ a lot between the different metropolitan areas. The price of a single ticket valid for the main city varies from €0.57 up to €3.51. The monthly pass varies from €20.21 to €134.39. However, these figures make no difference with the size and economic features of the metropolitan areas.

Single ticket price for the main city (€)



Monthly pass price (€)



(1) Green figure refers only to urban bus, and yellow figure to trolleybuses

(2) Figure includes all modes

(3) Green figure refers to regional buses, and blue figure includes all urban modes (bus, tram and metro)

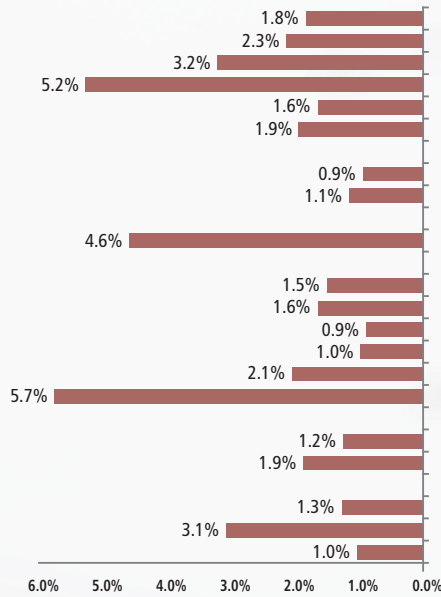


The monthly pass fare in main city compared to GDP per capita (annual GDP in city divided by 12) gives a ratio of 2.2%. The cheapest monthly passes are in Copenhagen, Paris, Prague and Warsaw (1%) while the highest prices are in Sheffield (5.7%), Birmingham (5.2%) and London (4.6%), all situated in the United Kingdom.

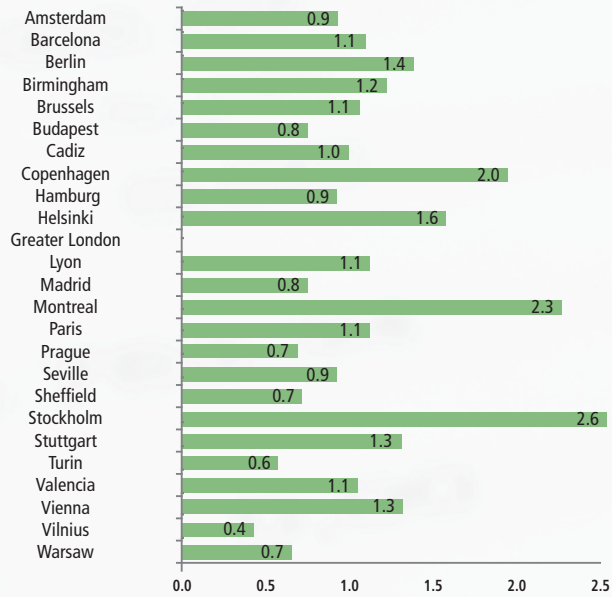
If we compare the single ticket with the petrol litre price (unleaded 95) we observe that lower ratio (0.4-0.9) should contribute to the use of public transport, while on the other hand higher ratios (over 1.5) indicate high level of welfare (Copenhagen, Helsinki, Montreal, Stockholm) or costly public transport systems.

Main city fare ratios

Monthly pass fare in main city / Monthly GDP per capita (%)



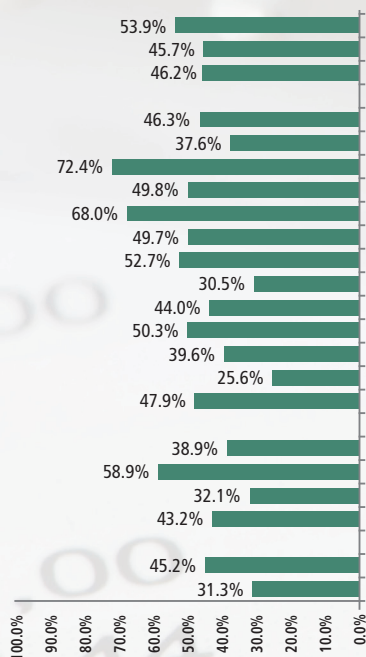
Single ticket fare in main city (€) / petrol litre price (unleaded 95 in 2011, €)



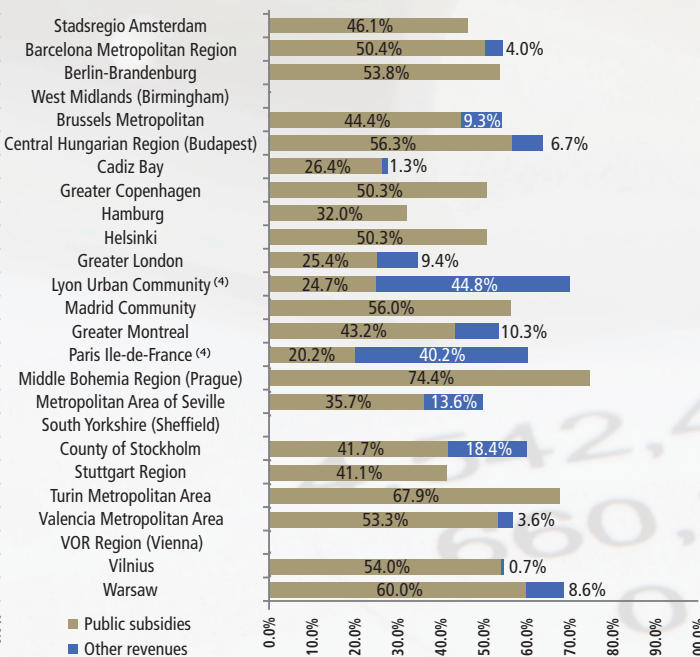
> The rates of coverage of operational cost by fare revenues are also varying greatly, some cities cover more than 50% of operational cost with fare revenues but others are far from it. In average among those metropolitan areas surveyed, the operational costs of public transport in 2011 are covered 45.9% by fare revenues and 45.8% by subsidies, which shows a stabilization compared to last edition (2009).

Coverage of operational costs

Coverage by fare revenues



Coverage by public subsidies and other revenues



(4) In French metropolitan areas (Lyon Urban Community and Paris Ile-de-France) the percentage of "Other revenues" refer to the transport tax (Versement Transport), covering 44.8% and 40.2% of operational costs respectively



MEMBERS AS OF 1ST JANUARY 2012

PTA	City	Web Site
STADSREGIO	AMSTERDAM	www.stadsregioamsterdam.nl
ATM	BARCELONA <i>MoB*</i>	www.atm.cat
VBB	BERLIN-BRANDENBURG <i>President</i>	www.vbb.de
CTB	BILBAO	www.cotrabi.com
CENTRO	BIRMINGHAM	www.centro.org.uk
MRBC	BRUSSELS-CAPITALE REGION	www.bruxellesmobilite.irisnet.be
BKK	BUDAPEST <i>MoB*</i>	www.bkk.hu
CMTBC	CADIZ BAY	www.cmtbc.es
MOVIA	COPENHAGUE	www.movia.dk
RMV	FRANKFURT	www.rmv.de
HVV	HAMBURG	www.hvv.de
HSL	HELSINKI <i>MoB*</i>	www.hsl.fi
TfL	LONDON	www.tfl.gov.uk
SYTRAL	LYON	www.sytral.fr
CRTM	MADRID <i>Vice President - acting Treasurer</i>	www.crtm.es
AMT	MONTREAL	www.amt.qc.ca
EPT	MURCIA	www.entidadpublicadeltransporte.es
RUTER	OSLO	www.ruter.no
STIF	PARIS ILE-DE-FRANCE <i>Vice President</i>	www.stif.info
ROPID	PRAGUE	www.ropid.cz
CTAS	SEVILLA	www.consorciotransportes-sevilla.com
SYPTÉ	SHEFFIELD <i>MoB*</i>	www.sypte.co.uk
SL	STOCKHOLM	www.sl.se
VRS	STUTTGART	www.region-stuttgart.org
AMMT	TORINO <i>MoB*</i>	www.mtm.torino.it
aVMM	VALENCIA	www.avmm.es
VOR	VIENNA	www.vor.at
MESP	VILNIUS	www.vilniustransport.lt
ZTM	WARSAW <i>MoB*</i>	www.ztm.waw.pl

*MoB**: Member of the Board