



# ***The Functional Path: Competitive Cities in the Global Economy***

Workshop on Approaching New Functional Areas

**ESPON-Luxembourg**

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# Introduction

Metropolitan Regions are commonly defined according to 3 distinct approaches.

- **The administrative approach**

Based on the legal or administrative statues or municipalities or equivalent entity, or sometimes a group of municipalities under a regional government

- **The morphological approach**

Based on the extent and/or continuity of the build-up area, the number of inhabitants, and proportion of the municipal areas covered by urban settlements.

- **The functional approach**

Based on daily commuting flows between a core area – that might be defined according to morphological or administrative criteria – and surrounding territories. Analyses of commuting flows determine which areas are included (or not) in the Metropolitan Region.

# Methodology

There are several definitions of Metropolitan Region provided by national statistical offices, researchers or international institutions. All definitions, therefore, employ at least one of the 3 following criteria:

- **Population density**

the MR area has to be densely populated or densely build-up

- **Workers commuting (commuting rate)**

commuting within the MR – from the periphery to the core area- has to be higher than commuting between the MR and the other surrounding regions

- **Population size**

the MR has to have a large size, either in terms of employment or population

## Criteria for adding neighbouring regions to the pivot region:

- the proposal is to aggregate neighbouring regions (PU or IN but not both), re-compute the commuting rate of this larger region. The aggregation continues as to bring the commuting rate below the fixed threshold
- Geographical Proximity.
- Begin with the region with the lowest commuting rate.
- Transport infrastructure (highways, railways).

The proposed methodology is based on 3 criteria:

- **Population density:**

The region must be classified as Predominantly Urban (PU) with a population of at least 1 million of inhabitants

- **Workers commuting:**

The commuting rate of the UFR must be higher than 1 but smaller than 1.10.

- **Population size:**

It is considered a metro-region if its population is at least 1,5

# Summarising:

## TL3 Regions

Is the region PU > 1,000,000?

Yes

No

Does not meet criteria of population density

Is the commuting rate higher than 1?

Yes

No

Does not meet criteria of commuting

Is the commuting rate lower than 1.10?

Yes

No

The urban region is economically self containing

Add neighbouring PU or IN regions to the core region

Is the commuting rate lower than 1.10 now?

Yes

Is the population higher than 1.5 million inhabitants?

Yes

OECD metro-region

No

Does not meet criteria of population size

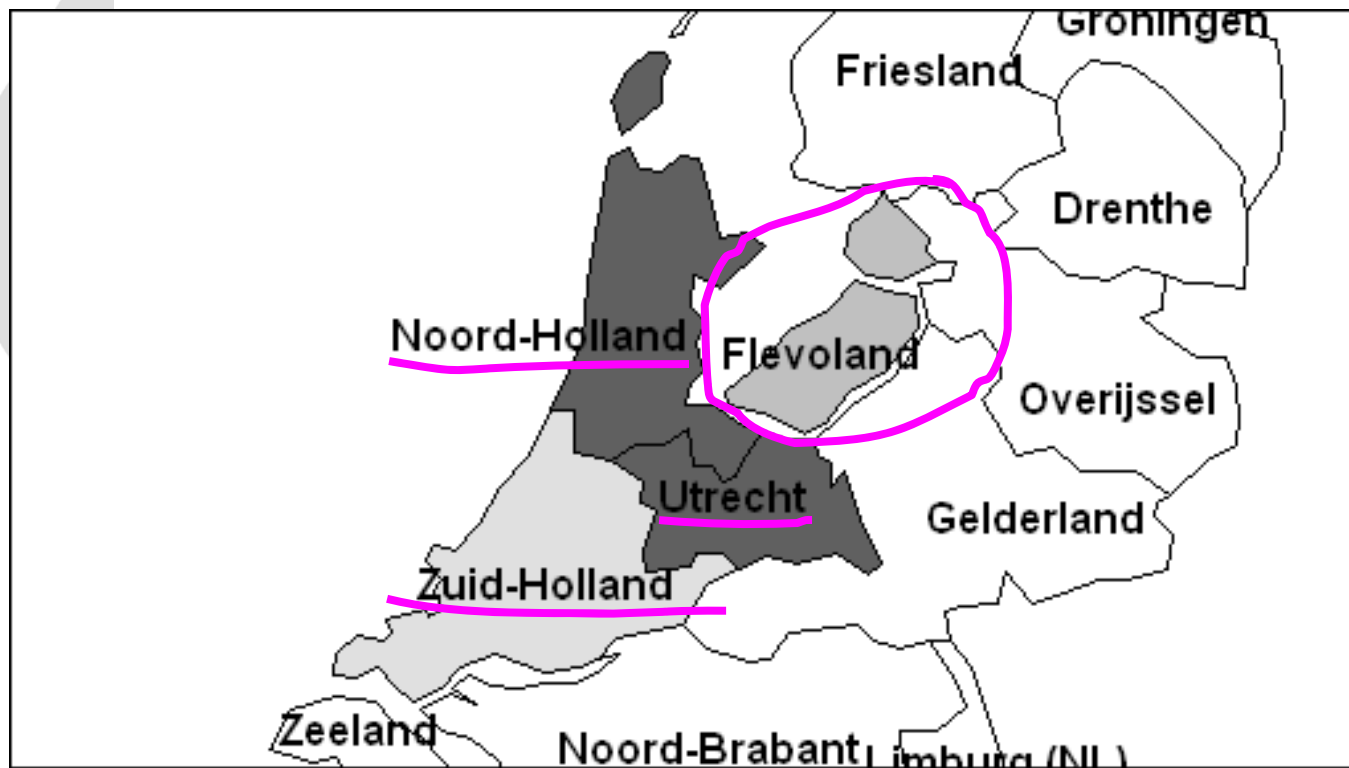
Some examples:

## Czech Republic: Prague UFR



<i>Region Name</i>	<i>Region type</i>	<i>Population</i>	<i>Population sum</i>	<i>Comm. rate</i>	<i>Comm. rate changes</i>
<b>Hlavní mesto Praha</b>	PU	<b>1,164,700</b>		<b>1.13</b>	
Stredoceský	IN	1,124,300	2,289,000	0.89	1.02

# The Netherlands: Randstad UFR



<i>Region Name</i>	<i>Region type</i>	<i>Population</i>	<i>Population sum</i>	<i>Comm. rate</i>	<i>Comm. rate changes</i>
<b>Utrecht</b>	PU	<b>1,123,700</b>		<b>1.14</b>	
<b>Noord-Holland</b>	PU	<b>2,542,600</b>	3,666,300	<b>1.14</b>	1.14
Flevoland	IN	335,300	4,001,600	0.69	1.10
Zuid-Holland	PU	3,432,000	7,433,600	0.99	1.05

# Korea: Seoul UFR



<i>Region Name</i>	<i>Region type</i>	<i>Population</i>	<i>Population sum</i>	<i>Comm. rate</i>	<i>Comm. rate changes</i>
<u>Seoul</u>	PU	<u>10,331,244</u>		<u>1.22</u>	
Incheon	PU	3,786,033		0.96	
Gyeonggi-do	IN	2,539,587	16,656,864	0.91	1.06

# Advantages

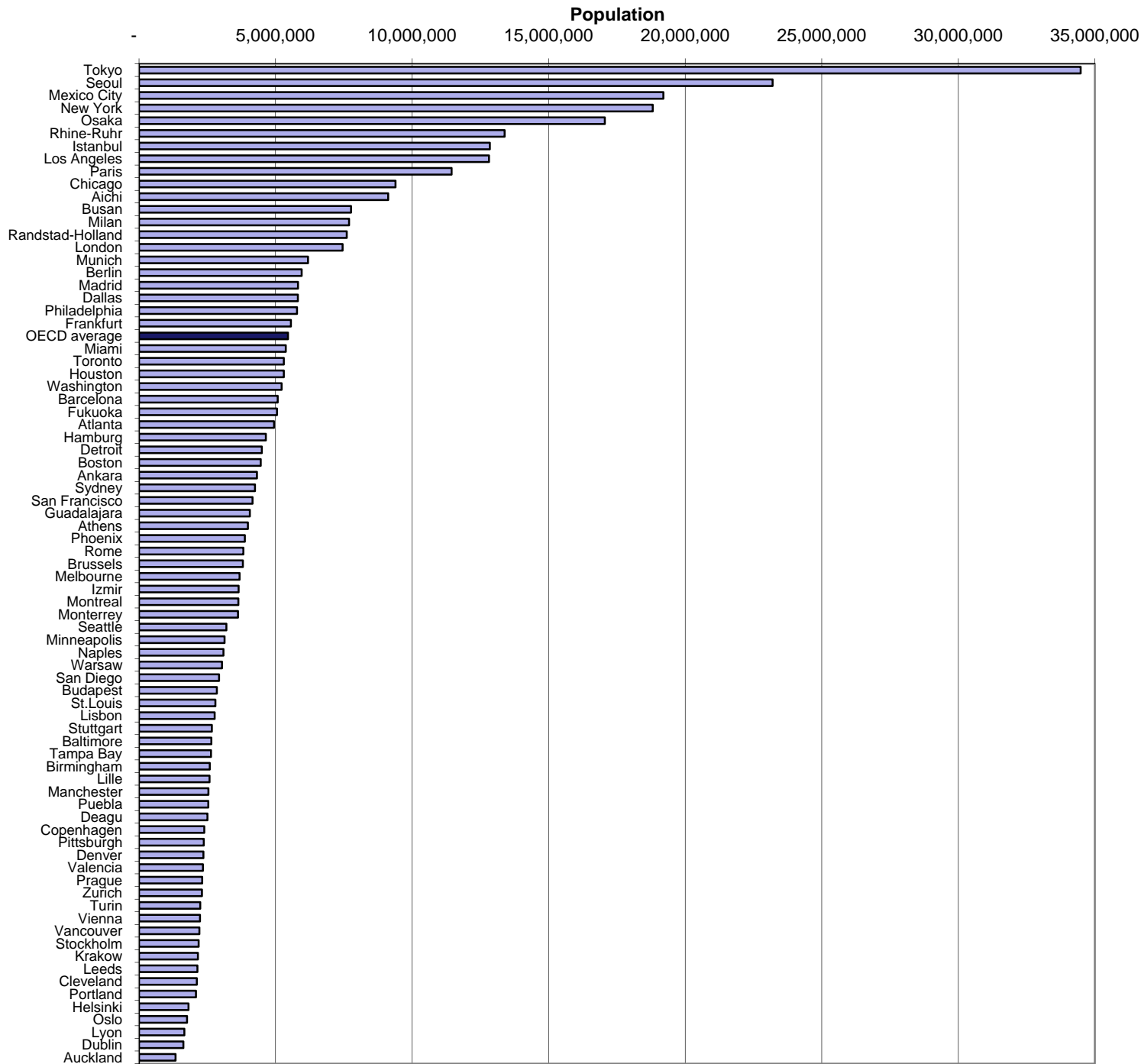
- The use of this metropolitan definition gives us an objective instrument to compare 78 metropolitan agglomerations across different countries.
- The definition of the metro-region is based on a functional approach.
- The definition is easy to implement
- Availability of data at TL3 level.
- Finally, it is a good point of reference for possible further extensions

# Disadvantages

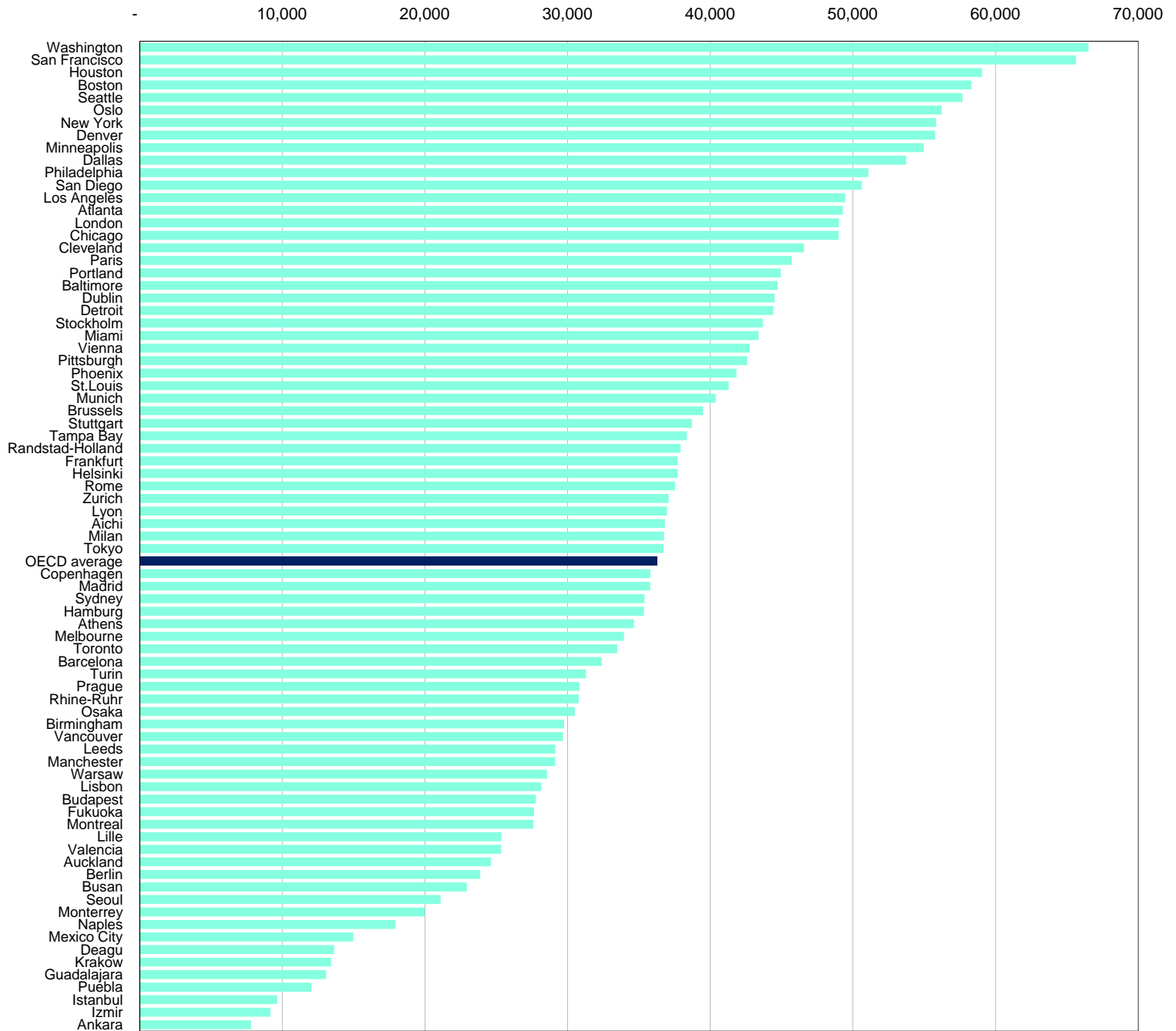
- Inadequacy to identify Metropolitan Regions with a polycentric structure
- The use of big administrative territorial units (TL3) induces delimitation problems

# OECD Metropolitan regions database:

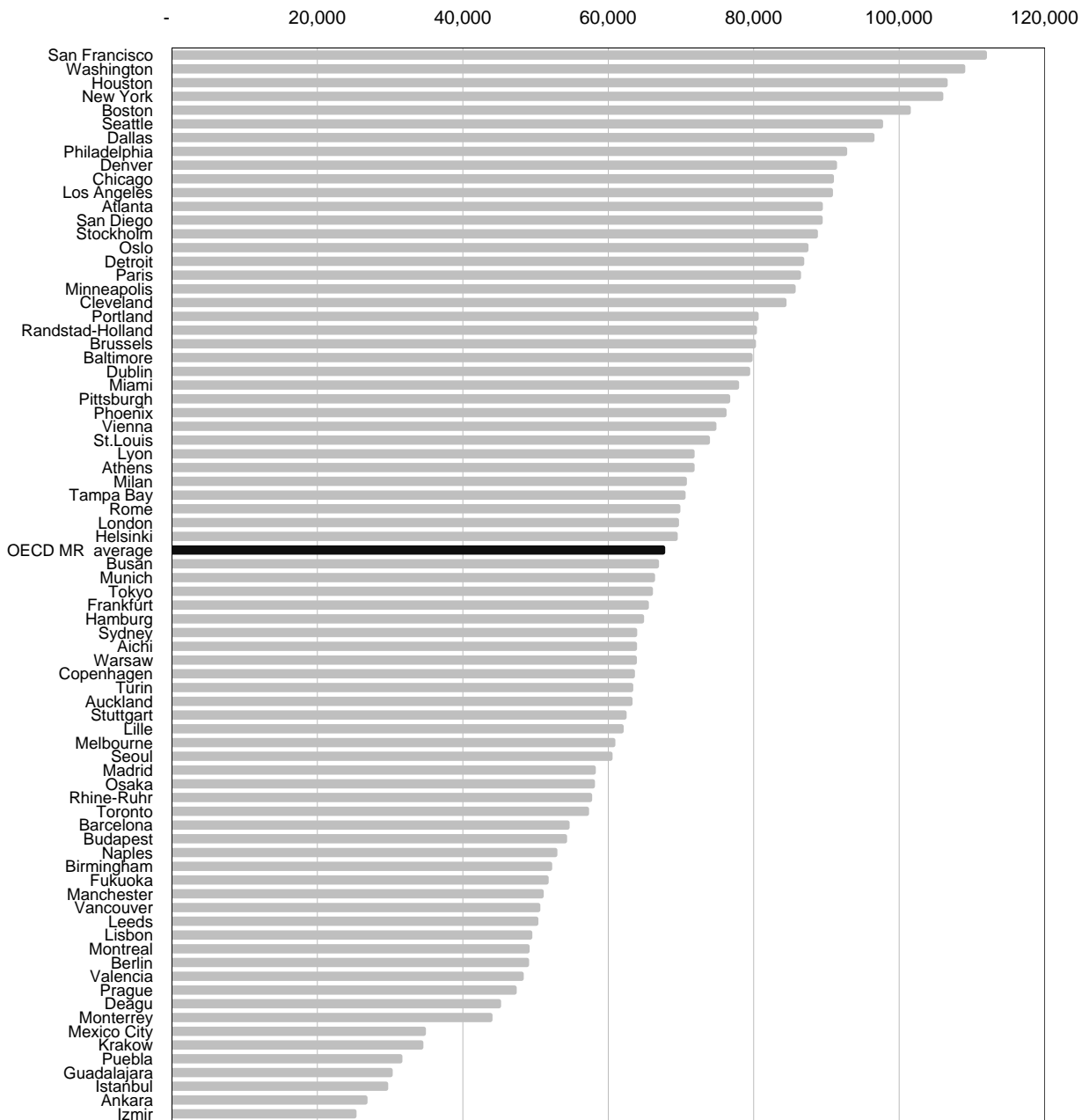
- Data:
  - Geographic
  - Demographic
  - Economic (production, labour,...)
  - Innovation (patents, education attainment,...)
  
- Some examples:



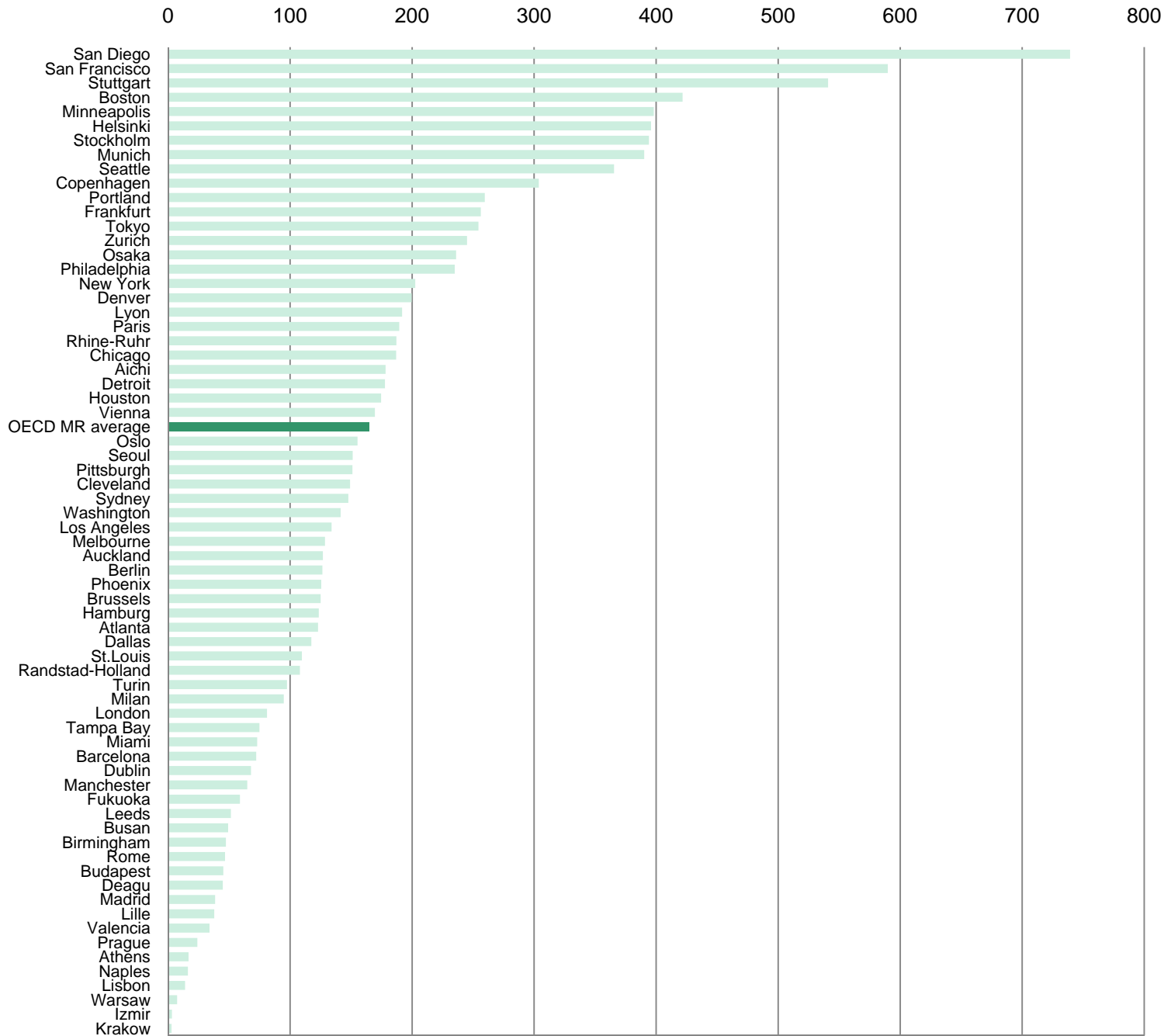
per capita GDP (2005) in US Dollars



Productivity (2005) in US Dollars



PCT patent per million population (2005)





*Thank you for your attention!*