



**IL CONTRIBUTO DELLE PICCOLE E MEDIE CITTÀ  
ALLA CRESCITA REGIONALE IN ITALIA. PRIME  
EVIDENZE PER IL PERIODO 2001-2011**

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*XXXV Conferenza Italiana di Scienze Regionali,  
Padova, 13 Settembre 2014*

## Outline of the presentation

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1. Aim of the work and research programme;
2. Methodological issues:
  - definition and identification of the city
  - Urban hierarchy: definition and measurements.
3. Dynamics of the different typologies of cities
4. Concluding remarks

Foreword

Urban  
Ranking

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Conclusions



## Aim and method of the work

Following the renewed attention of the scientific debate on the role of urban areas as economic drivers for regions and Countries



**We explore the contribution made by small and medium-sized urban systems to regional growth**

Aims of our research project:

1. Provide a framework to describe/measure economic relevance of cities
  - How to identify small and medium cities
  - How to classify cities? Other measures beyond size?
2. How “size” and other relevant characteristics affected economic performance of cities?
  - How small and medium cities performed in Italy?
  - Other factors than size are relevant to exploit agglomeration economies?

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## Aim and method of the research program

Following the renewed attention of the scientific debate on the role of urban areas as economic drivers for regions and Countries



**We explore the contribution made by small and medium-sized urban systems to regional growth**

Steps of the analysis:

1. Identification of a reliable **spatial definition of the urban areas**
2. Proposal of an **Italian urban ranking**, mainly based on the specialization in rare urban functions
3. Analysis of the **economic performance of the different typologies of cities**
4. Explorative analysis on the links between size and growth and on the **dimensions that have driven regional growth**

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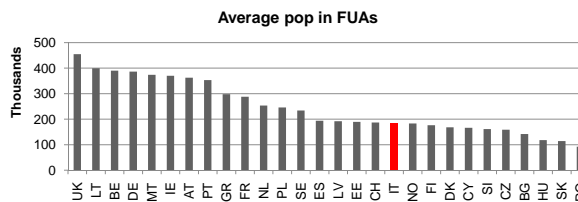
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## Small and medium cities in Italy

1. Functional urban areas are relatively small in Italy



2. In Italy 47% of population lives in areas between 50 000 and 500 000 inhabitants  
39% lives in large and metro urban areas

3. Geographical and historical factors often bounded urban expansion  
- urban expansion as a coalescence process  
- urban development of small and medium cities

4. Cities and economic development in Italy:  
- before 1950s: Industrial cities in Northern Italy  
- 1950s-1970s: economic take-off, role of small and medium cities (industrial clusters)  
- 1980s-1990s: (large) cities as drivers for growth  
- 2000s ???

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## Towards a taxonomy of Italian Cities

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## The identification of the city

The procedure proposed in the work is meant to circumscribe the city's boundaries starting from the identification of the **"unavoidable ingredients"** of an urban pole:

- **Functional approach** and **demographic size** (FUAs)
- Density of **urbanized land** (UMZs)
- Level and variety of **urban specialized functions** (Urban rank)
- **Economic outcome levels** (Employees and GDP)

The proposed procedure is based on the most recent literature (i.e. ESPON studies)

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## Units of analysis

### 1. Functional approach

Administrative boundaries are no more representative of urban areas (urban coalescence, people re-distribution, admin. fragmentation)

Functional Urban Regions (FUAs) selected as units of analysis

Italian Local Labor Systems with  
total pop >100 000 and  
main centre pop >15 000

+

### 2. Morphological criterion

Merge of neighboring FUAs sharing the same Urban Morphological Zone

**232 FUAs, including 10 "greater FUAs"**

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### The selection of urban rare functions

	Specialization index FUA/non-FUA (a)	Concentration index normalized for urban FUAs (b)	Overall degree of urbanity (geometric average of a*b)
<b>HT and ICT manufacturing</b>			
CF Chemical-pharmaceutical industry	2.54	1.42	1.90
CI Computers, electronics, optics	1.91	1.23	1.53
<b>MHT manufacturing</b>			
CK Mechanical engineering	1.14	1.10	1.12
CL Means of transport	1.29	1.16	1.22
<b>Logistics</b>			
H Transportation and storage	1.39	1.01	1.18
<b>Financial services</b>			
K Financial and insurance activities	1.72	1.03	1.33
<b>Publishing and telecommunications</b>			
JA Publishing	5.18	1.31	2.61
JB Telecommunications	8.05	1.33	3.27
<b>KIBS and universities</b>			
JC Information services	2.45	1.16	1.68
MA Professional activities	1.32	0.97	1.13
MB Research & Development	2.62	1.23	1.80
University & research institutes	11.10	1.37	3.90
<b>Personal care services</b>			
R Arts and entertainment activities	1.05	0.98	1.01
E Public utilities (water, urban sanitation)	1.71	0.98	1.30
Health staff	1.34	1.03	1.17
<b>Other specialized services to firms</b>			
N Administration and support activities	2.27	1.07	1.56

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### Urban hierarchy: criteria for FUAs ranking

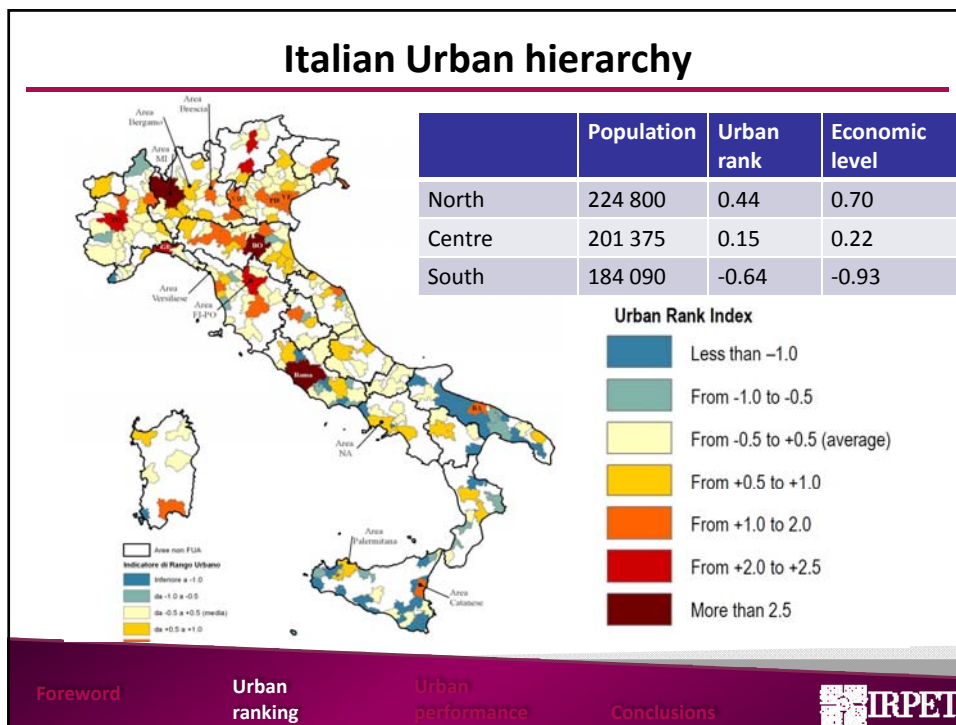
FACTORS

- **Urban functions specialization**  
(employees in rare urban functions on total amount compared to FUAs average)
- **Quality of urban functions**  
(rarity level of functions existing - each function has a different weight)
- **Functional diversity**  
(no. of rare functions)
- **Sectoral Dispersion/Concentration of urban specialization (homogeneity of functions)**  
(inverse of CV of sectorial specialization)
- **Economic level**  
(employees per inhabitant and GDP per inhabitant)

Variables	Coefficients of Correlation with the first component	Factorial weights for the first component
GDP per inhabitant	0.821	0.265
No. of urban specializations	0.782	0.252
Total urban specializations	0.774	0.250
Employees per inhabitant	0.710	0.229
Quality of urban functions	0.676	0.218
1/CV sectorial specializations	0.505	0.163

Variance explained  
by the first component  
**51.6%**

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### Italian Urban hierarchy (index value > 1)

City typology	City name	Presence of urban functions	Economic performance	Production specialization index	Cultural specialization index	Synthetic urban ranking index
<b>LARGE METROPOLITAN SYSTEMS</b> (pop > 1 milion) <i>4 obs</i>	Milan area	HIGH	HIGH	1.2	1.3	2.95
	Rome	HIGH	HIGH	1.0	1.7	2.78
	Turin	HIGH	HIGH	1.4	1.3	2.37
	Naples area	HIGH	LOW	0.9	1.0	0.78
<b>MIDDLE-SIZED METROPOLITAN SYSTEMS</b> (pop 500 th-1 milion) <i>11 obs</i>	Bologna	HIGH	HIGH	1.3	1.2	3.34
	Genova	HIGH	HIGH	0.9	1.3	2.41
	Florence-Prato area	HIGH	HIGH	0.8	1.0	2.10
	Padova	HIGH	HIGH	1.0	1.2	1.86
	Venice	HIGH	HIGH	0.9	0.8	1.51
	Verona	HIGH	HIGH	0.8	0.9	1.46
	Bari	HIGH	MEDIUM	1.2	1.2	1.41
	Brescia-Lumezzane area	MEDIUM	HIGH	1.2	0.9	1.39
<b>MEDIUM CITIES</b> (pop 250-500 th) <i>18 obs</i>	Catania-Acireale area	HIGH	MEDIUM	1.0	1.0	1.01
	Parma	HIGH	HIGH	1.3	1.0	1.74
	Modena	HIGH	HIGH	1.4	0.8	1.40
	Reggio Emilia	HIGH	HIGH	1.5	0.8	1.36
	Vicenza	HIGH	HIGH	1.2	0.8	1.26
	Udine	HIGH	HIGH	1.1	1.0	1.22
	Cagliari	HIGH	MEDIUM	1.0	1.2	1.13
<b>SMALL CITIES</b> (pop 100-250 th) <i>86 obs</i>	Pisa	HIGH	HIGH	0.9	1.9	1.91
	Siena	HIGH	HIGH	0.8	1.5	1.86
	Ancona	HIGH	MEDIUM	1.0	1.1	1.64
	Ferrara	HIGH	HIGH	1.0	1.1	1.33
	Livorno	HIGH	MEDIUM	1.1	0.7	0.96

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## Dynamics of Italian cities, urban size and hierarchy

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## Dynamics of Italian cities, 2001-2011

- Analysis of FUAs, by comparing Census data (2001-2011)

- Employment growth as proxy of urban economic growth
  - linked to structural change and investment in cities
  - attractiveness of cities (jobs opportunities, wages-productivity, quality of life)

-The context:

2000s: a decade of growth of jobs in Italian FUAs (+3%, private jobs + 4.7%)  
However, high heterogeneity in growth between FUAs, both when taking account geography and demographic size

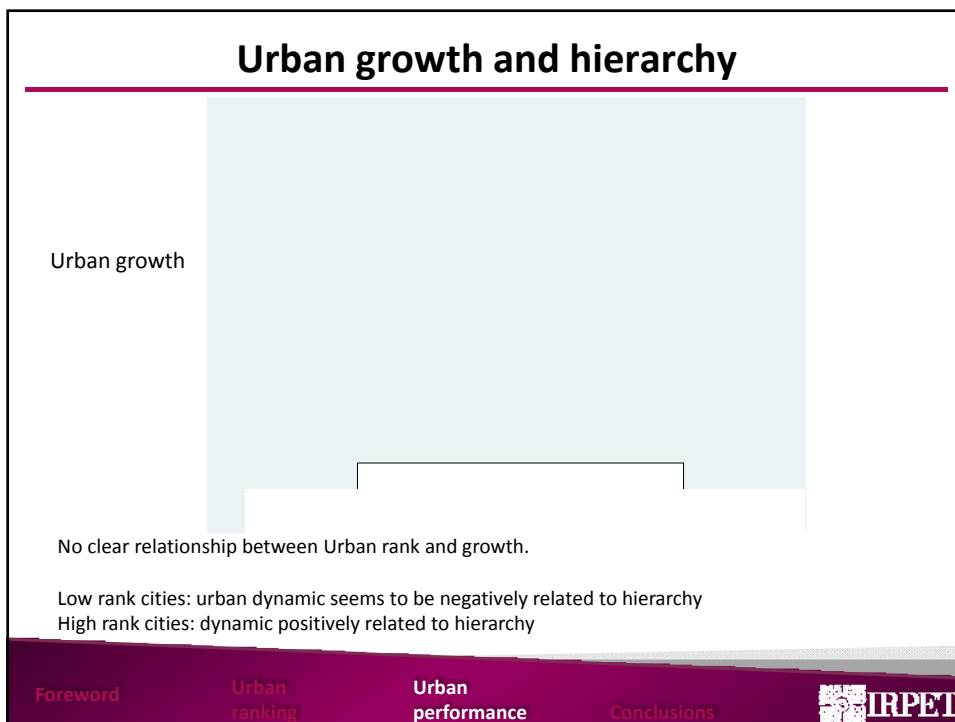
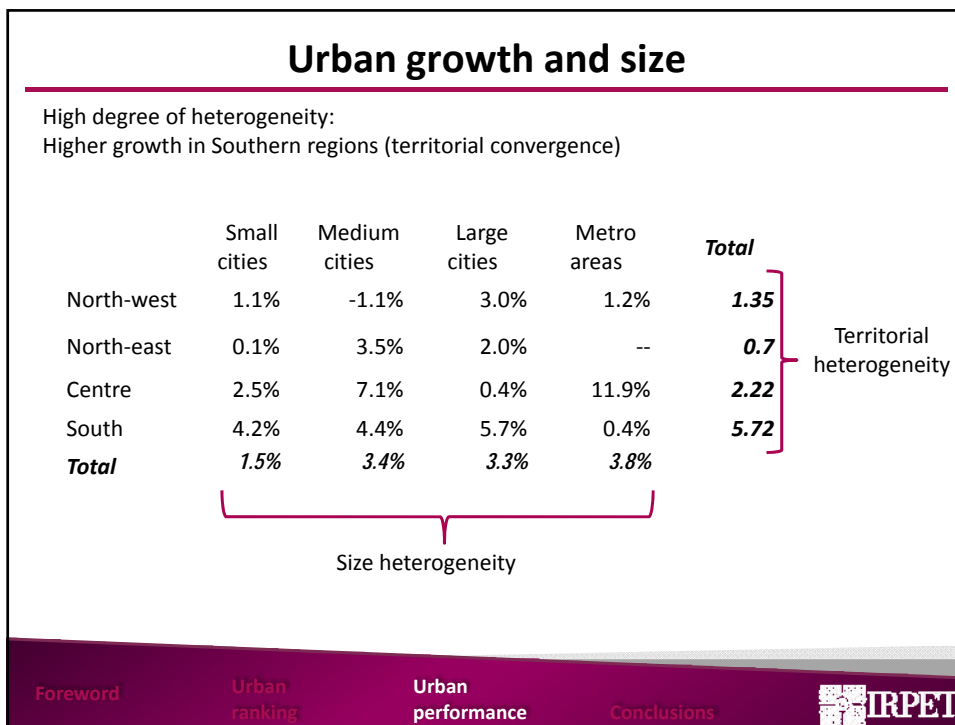
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## Urban growth and hierarchy

		Small cities	Medium cities	Large cities	Metro areas	<b>Total</b>
<i>Urban ranking</i>	<0	2.4%	3.6%	---	---	2.5%
	Between 0 and 1	0.6%	3.2%	6.4%	3.0%	1.5%
	Between 1 and 2	1.9%	3.8%	2.8%	---	2.6%
	>2	9.2%	1.4%	---	4.1%	4.3%
	<b>Total</b>	1.5%	3.4%	3.3%	3.8%	

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## Urban growth and hierarchy

		North-west	North-east Centre	South	<b>Total</b>	
<i>Urban ranking</i>	<0		0.60%	9.20%	1.60%	
	Between 0 and 1		3.20%	1.90%	1.40%	3.40%
	Between 1 and 2	2.40%	6.40%	3.80%	---	3.30%
	>2	3.60%	3.00%	2.80%	4.10%	3.80%
	<b>Total</b>	2.50%	1.50%	1.90%	4.30%	

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## Urban growth and hierarchy

*Correlation between urban growth and Urban rank index, by macroregions and demographic dimensions*

	Small and medium	Large and metro
North-West	7%	-4%
North-East	<b>27%</b>	-53%
Centre	<b>20%</b>	49%
South	-31%	-72%

In NE and Centre, in small and medium cities urban growth is positively related with Urban rank

No relationship in NW

Negative relationship in South

-> geographic factors affect urban dynamics

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## Concluding remarks

In the Italian case, **some small and medium-sized cities emerge in urban hierarchy** thanks to the high level and quality of the **urban functions** performed. Their peculiarity emerges also in term of economic growth.

- The aggregate growth rate (in terms of jobs creation) showed a correlation with city size: metropolitan systems and medium cities grew more than small cities.
- However, small cities are characterized by a high degree of geographical heterogeneity:
  - **In Central and North-eastern Italy, medium cities showed the highest growth rates.** In these cases, the high urban rank might be a determinant of the good performance and it acts, therefore, as substitute of the lack of size.
  - Those cities often belongs to polycentric regions.
- Hence, **factors different from size**, as economic structure, urban functions, settlement pattern, urban amenities, etc. **may compensate for the lack of metropolitan scale.**
- Development factors can be crucial for the future development in Italy, characterized by a **mature phase of the urbanization** impeding urban demographic growth

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## Further steps

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1. Methodological and empirical shortcomings of the explorative analysis
  - Identification of dimensions of urban hierarchy
  - Measurement of urban performance (jobs)
2. Towards an identification of the drivers of growth for urban systems
3. Urban growth in age of crisis
4. Links between large and small urban systems (agglomeration shadows)

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Grazie per l'attenzione...  
...e per la pazienza!

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