

**Civic Monitoring of Government Programs and
Policies**

LPSA Europe & Central Asia Regional Working Group

Driving Transparency & Civic Engagement: The OpenCivitas Model from Italy

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**LPSA Expert Working Group on Europe & Central Asia – Open Meeting –
June 2025**

Italian Institutional Setting

- ▶ **20 Regions**, 15 Ordinary Regions, 5 Special Regions.
- ▶ **Municipalities** (8011, 1351 of which are in special regions) spent 6.8% of total current public expenditure in 2015.
- ▶ **Headed by mayors**, directly elected for *five-year terms* and subject to a *two-term limit*.
- ▶ **Main expenditure responsibilities:** Social services, childcare and nursery schools, school related services, environment protection and waste management, local police, local transport and maintenance of local roads, culture and recreation, registry, town planning and central administration.
- ▶ **Main sources of revenue:** (current grants), local income tax surcharge, property tax, fees.

Standard Expenditure Needs in Italy (1)

Background

- In 2009-2010 a reform of fiscal federalism took place
- Municipalities already had quite large tax autonomy (since 1998)
 - Real estate tax
 - Municipal personal income tax (as a surtax on national PIT)
 - On both taxes the rate could be manoeuvred around the standard national rate
- Grants from the State were determined according to past legislation and practices, with no precise connection to the actual needs
- The reform intended to introduce an estimation system for the expenditure needs, and upon them build an equalisation system

Standard Expenditure Needs in Italy (2)

The equalisation process

- Calculation of standard expenditure needs (SEN)
- Calculation of standard fiscal capacity (SFC)
 - Revenues attainable from the own taxes, at standard rates
- Fiscal Gap = difference between SFC and SEN
- Calculation of the equalisation subsidies based on the fiscal gap
- Determination of grants to municipalities
 - Transitional period (2015-2030) as a weighted average of historical needs and equalisation subsidies

Standard Expenditure Needs in Italy (3)

The indicators of performance

- Calculation of standard expenditure needs (SEN)
- Calculation of standard level of outputs (SLO)
- Determination of *expenditure gap* (historical expenditures - SEN)
- Determination of *output gap* (historical outputs - SLO) local
- Mapping each municipality into a four quadrants model
- Assessment of the performance of each municipality

The OpenCivitas Project: Timeline

- ▶ **May 2009 (Law no. 42/2009):** reformed the local governments' financing structure, introducing a new equalization system based on standard expenditure needs and fiscal capacity.
- ▶ **December 2013:** Government produced the first wave of standard expenditure needs (SEs) for municipalities in **Ordinary Regions**.
- ▶ **July 2014:** only mayors (and informally, press) were given access to the **expenditure** indicators (7 categories, based on SEs) via a website, *OpenCivitas.it*, and an individual code.
- ▶ **November 2014:** data open to the public.
- ▶ **Early 2016:** publication of **output and performance** data.



For each municipality

	Historic (a)	Standard (b)	Difference (a-b)
Expenditure	y	\hat{y}	Δy
Level of Service	g	\hat{g}	Δg

Performance evaluation

- *Expenditure score* = Δy
- *Output score* = Δg
- *Performance score* = $f(\Delta y, \Delta g, c)$
where: c = average standard cost of overall output

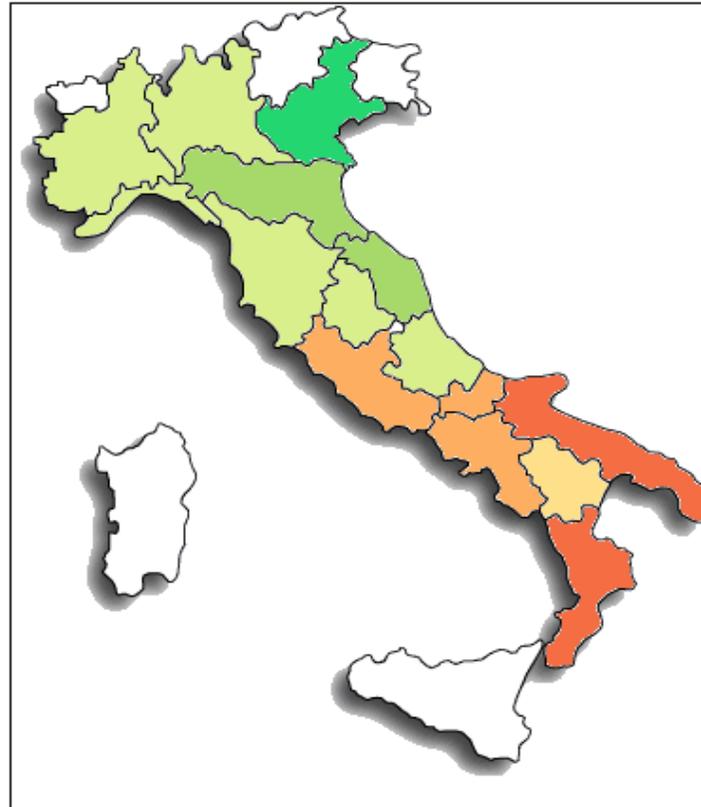
- On line publication of municipal data on expenditures and performances in the provision of public services
- Open access to all citizens
- Open data
- More information for local administrations
- Stimulates higher electoral accountability and citizens' participation

The rating system of Opencivitas.it

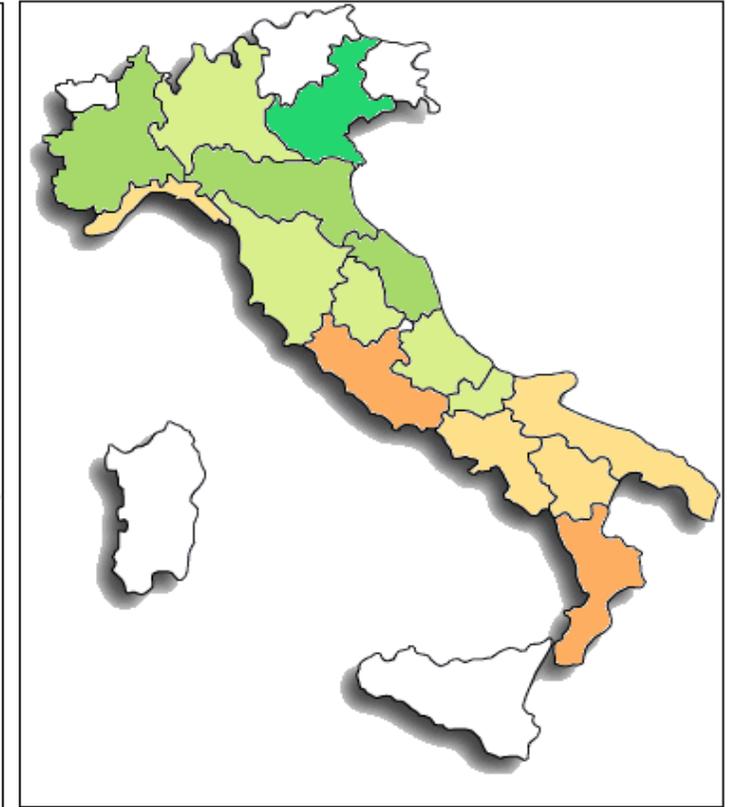
Expenditure score



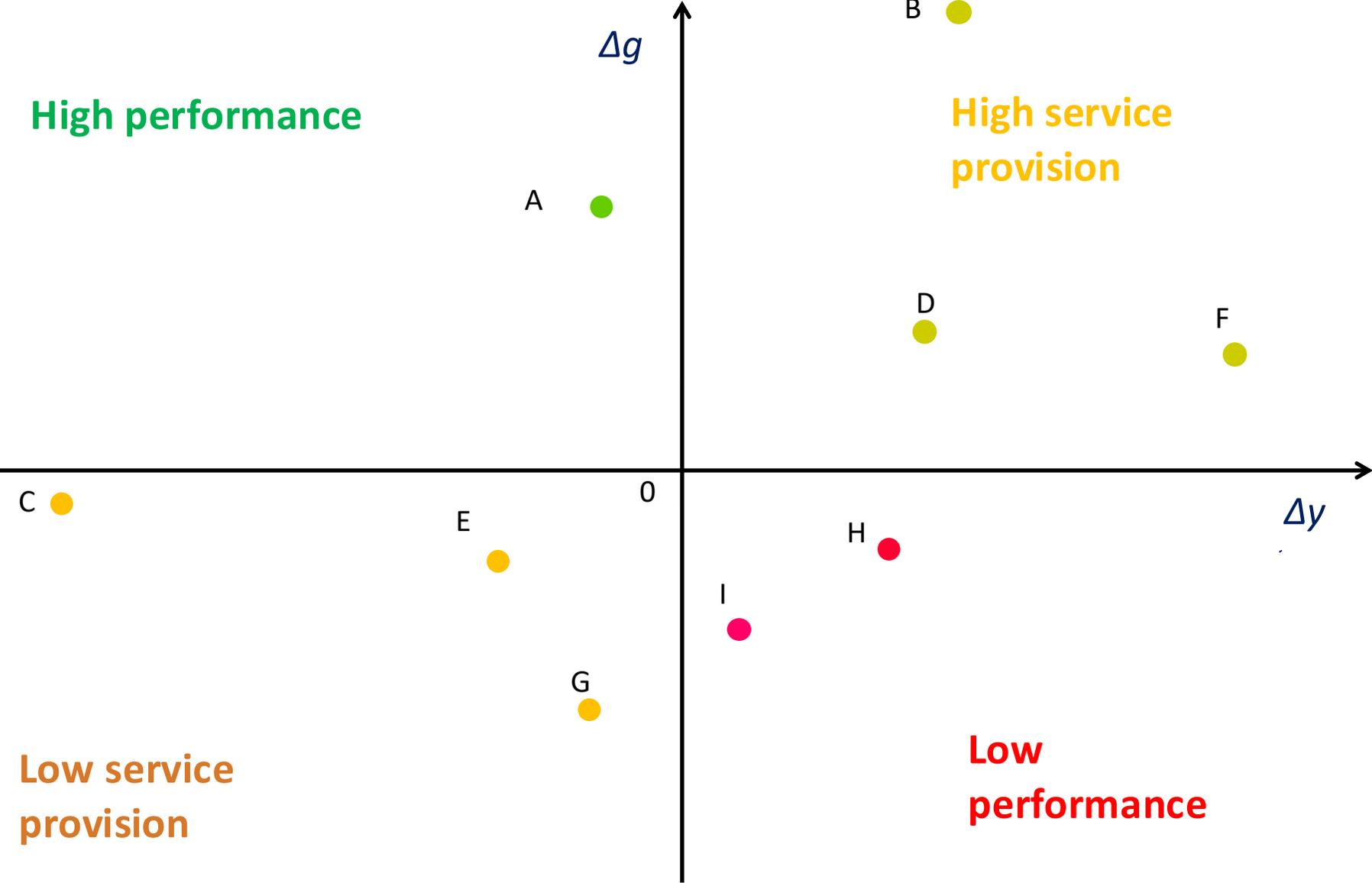
Service score



Performance score

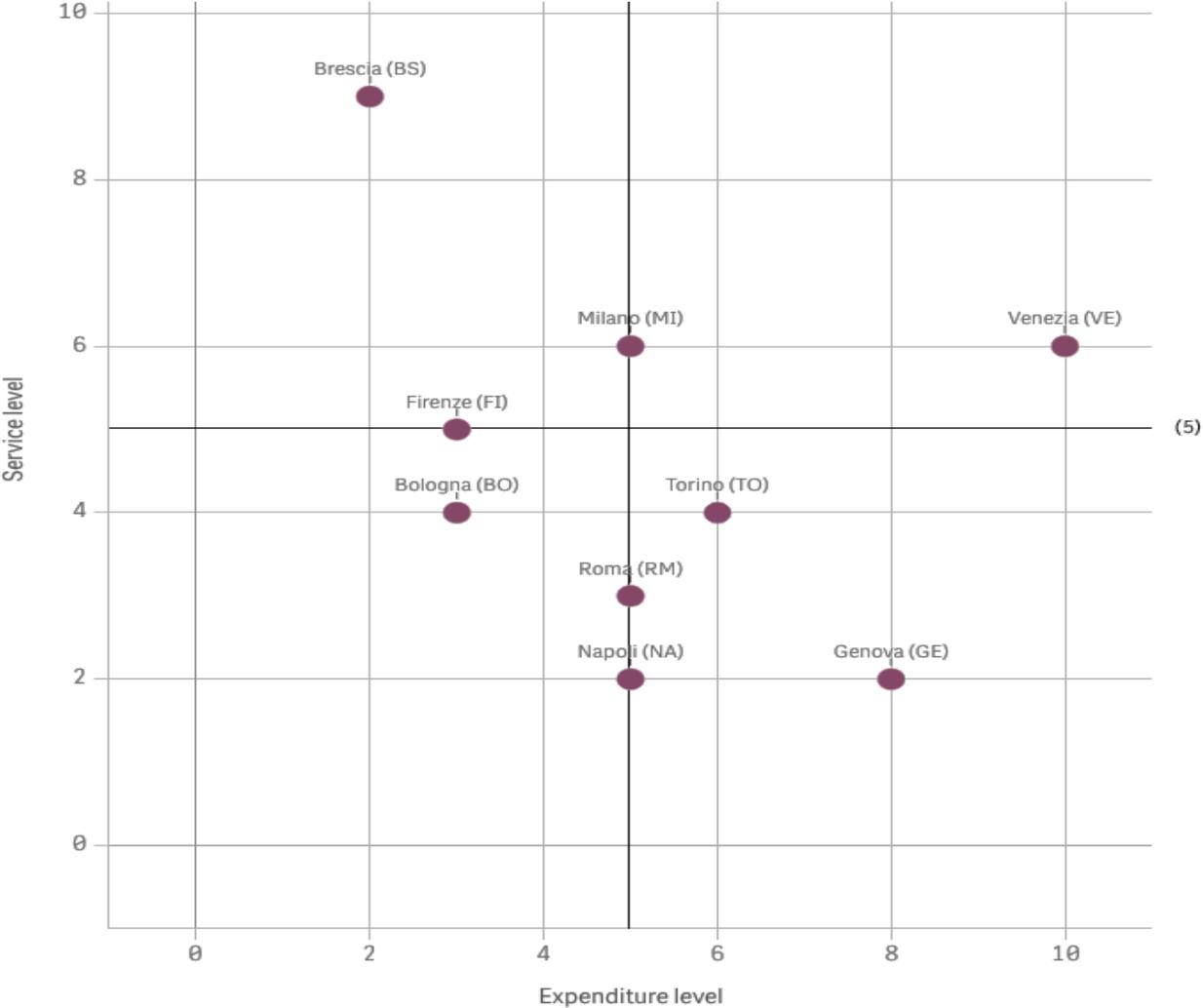


Performance Assessment: The Four-Quadrant Model



Evaluation of the performance of Italian municipalities

Area: Waste Management



Find Navigate **Compare** Performance analysis Solidarity fund



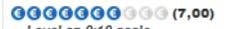







2018 Previous years REMOVE SELECTION

The elaborations, starting from 2017, are not always comparable between the different years as a result of methodological changes that have affected some functions. The changes are reported in the methodological notes published in the project section.

| Select a municipality or an aggregate |
|--|--|--|---|
| Municipality of Roma (Rm) | Municipality of Milano (Mi) | Municipality of Napoli (Na) | Municipality of Torino (To) |
|  Total of Functions |  Total of Functions |  Total of Functions |  Total of Functions |
| Population 31/12/2018
2.820.219 | Population 31/12/2018
1.395.980 | Population 31/12/2018
954.318 | Population 31/12/2018
860.793 |
| Historical expenditure
€ 2.996.931.208 | Historical expenditure
€ 1.458.470.702 | Historical expenditure
€ 740.407.337 | Historical expenditure
€ 808.820.963 |
| Standard expenditure
€ 2.815.410.309 | Standard expenditure
€ 1.331.503.660 | Standard expenditure
€ 805.389.681 | Standard expenditure
€ 784.059.231 |
| Difference €
€ +181.520.899 | Difference €
€ +126.967.042 | Difference €
€ -64.982.344 | Difference €
€ +24.761.732 |
| Difference %
+6,45% | Difference %
+9,54% | Difference %
-8,07% | Difference %
+3,16% |
| Expenditure level
 (7,00)
Level on 0/10 scale | Expenditure level
 (7,00)
Level on 0/10 scale | Expenditure level
 (4,00)
Level on 0/10 scale | Expenditure level
 (6,00)
Level on 0/10 scale |
| Service level
 (6,00)
Level on 0/10 scale | Service level
 (8,00)
Level on 0/10 scale | Service level
 (4,00)
Level on 0/10 scale | Service level
 (6,00)
Level on 0/10 scale |

Indicator - Total of Functions

Indicator	Q	Comune di Roma (RM)	Comune di Milano (MI)	Comune di Napoli (NA)	Comune di Torino (TO)
Standard expenditure - Euro per inhabitant		998,29	953,81	843,94	919,86
Standard expenditure - Euro		2.815.410.309,40	1.331.503.659,99	805.389.681,12	784.059.230,91
Historical expenditure - Euro per inhabitant		1.062,66	1.044,74	775,85	939,62
Historical expenditure - Euro		2.996.931.208,19	1.458.470.701,59	740.407.336,88	808.820.963,26
Historical vs Standard service level - %		-4,84	22,82	-11,89	1,22
Average labour cost - Euro per employee		44.258,47	43.744,93	42.269,39	42.287,28
Average labour cost - Euro per inhabitant		378,74	453,45	311,75	447,32

Find Navigate Compare **Performance analysis** Solidarity fund





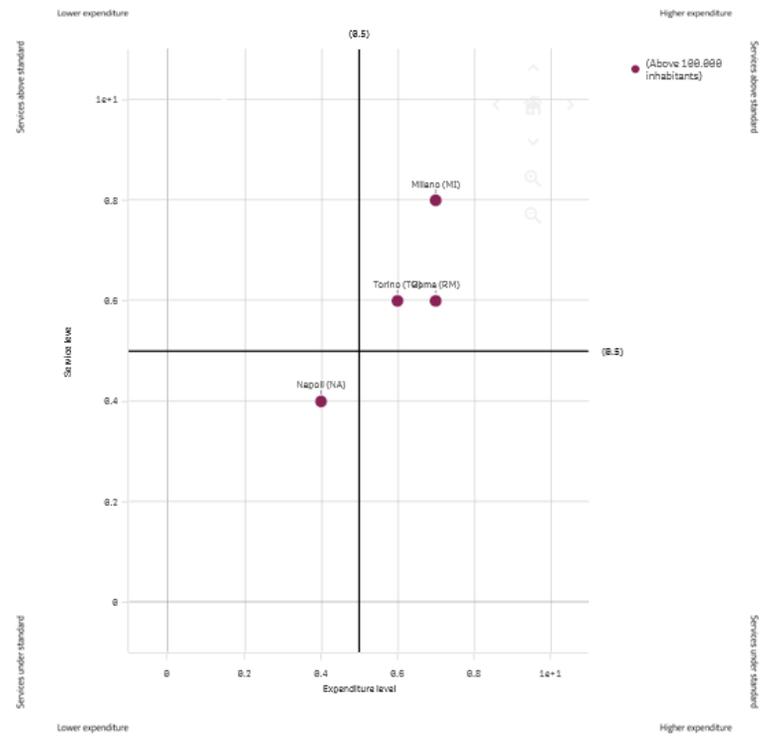





2018 Previous years REMOVE SELECTION

Municipality or aggregate

- Milano (MI) ✓
- Napoli (NA) ✓
- Torino (TO) ✓
- Roma (RM) ✓
- Italia
- Abruzzo
- Basilicata
- Calabria
- Campania
- Emilia Romagna
- Lazio
- Liguria
- Lombardia
- Marche
- Molise
- Piemonte
- Puglia



Municipalities are visualised only if they are assessable in terms of expenditure and services provided.

Municipalities are positioned in four quadrants based on the expenditure level and the quantity of services provided. Aggregating the two dimensions:

- Municipalities in the lower right quadrant record a historical expenditure higher than standard and offer a lower service level than the average of municipalities with the same number of inhabitants. On the opposite side, municipalities in the top left quadrant record a historical expenditure lower than the standard and a service level higher than the average of municipalities with the same number of inhabitants;
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2018 Previous years REMOVE SELECTION

 TOTAL OF FUNCTIONS
 **CENTRAL GENERAL SERVICES**
 LOCAL POLICE
 EDUCATION
 PUBLIC ROADS AND PLANNING
 WASTE MANAGEMENT
 SOCIAL CARE AND NURSERY SERVICES

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Select a municipality or an aggregate	Select a municipality or an aggregate	Select a municipality or an aggregate	Select a municipality or an aggregate
Municipality of Roma (Rm)	Municipality of Milano (Mi)	Municipality of Napoli (Na)	Municipality of Torino (To)
 Central General Services Population 31/12/2018 2.820.215 Historical expenditure € 535.904.912 Standard expenditure € 402.726.196 Difference € € +133.178.716 Difference % +33,07% Expenditure level  (9,00) Level on 0-10 scale Service level  (6,00) Level on 0-10 scale	 Central General Services Population 31/12/2018 1.355.980 Historical expenditure € 162.269.520 Standard expenditure € 212.841.667 Difference € -50.572.148 Difference % -23,76% Expenditure level  (2,00) Level on 0-10 scale Service level  (8,00) Level on 0-10 scale	 Central General Services Population 31/12/2018 954.318 Historical expenditure € 141.054.791 Standard expenditure € 115.438.835 Difference € € +25.615.956 Difference % +22,15% Expenditure level  (8,00) Level on 0-10 scale Service level  (4,00) Level on 0-10 scale	 Central General Services Population 31/12/2018 860.753 Historical expenditure € 126.979.924 Standard expenditure € 123.695.359 Differenza € +3.284.525 Differenza % +2,66% Expenditure level  (6,00) Level on 0-10 scale Service level  (6,00) Level on 0-10 scale

Indicator - Central General Services

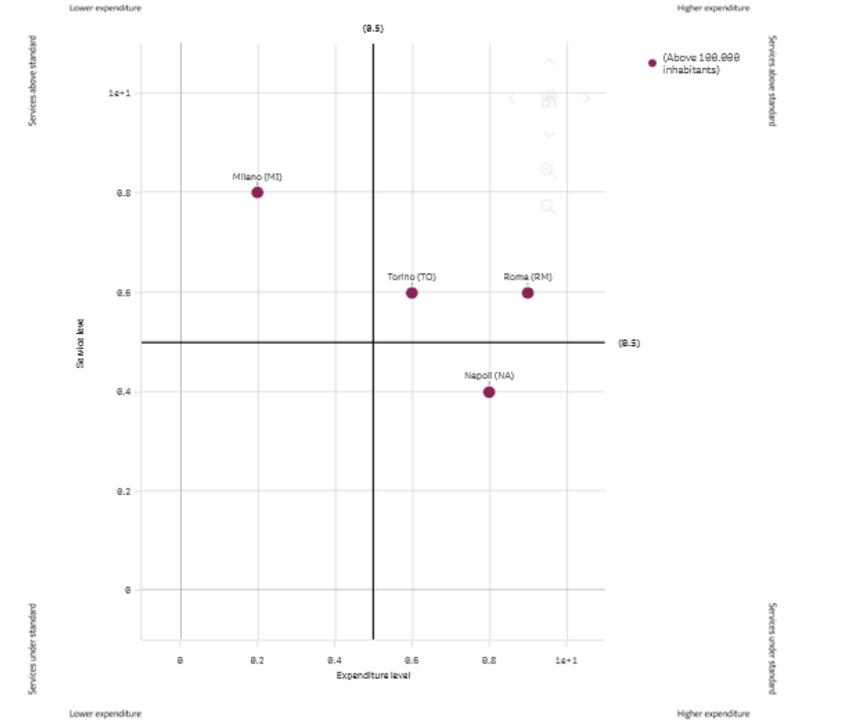
Indicator	Comune di Roma (RM)	Comune di Milano (MI)	Comune di Napoli (NA)	Comune di Torino (TO)
Standard expenditure - Euro per Inhabitant	142,88	152,47	128,96	143,79
Standard expenditure - Euro	482.726.196,22	212.841.667,23	115.438.834,78	123.695.396,98
Historical expenditure - Euro per Inhabitant	198,82	118,24	147,81	147,52
Historical expenditure - Euro	535.904.911,88	162.269.519,57	141.054.790,77	126.979.924,84
Historical vs Standard service level - %	4,84	21,82	-11,89	1,22
Average labour cost - Euro per employee	49.581,95	49.649,34	41.429,58	49.313,14
Average labour cost - Euro per Inhabitant	189,51	189,18	121,58	148,98
Number of employees - No. per 1000 Inhabitants	2,21	2,58	2,88	3,25

2018 Previous years REMOVE SELECTION

 TOTAL OF FUNCTIONS
 **CENTRAL GENERAL SERVICES**
 LOCAL POLICE
 EDUCATION
 PUBLIC ROADS AND PLANNING
 WASTE MANAGEMENT
 SOCIAL CARE AND NURSERY SERVICES

Municipality or aggregate

- Milano (MI) ✓
- Napoli (NA) ✓
- Torino (TO) ✓
- Roma (RM) ✓
- Italia
- Abruzzo
- Basilicata
- Calabria
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Municipality of Roma (Rm)	Municipality of Milano (Mi)	Municipality of Napoli (Na)	Municipality of Torino (To)
Local Police Population 31/12/2018 2.820.219 Historical expenditure € 331.954.343 Standard expenditure € 348.751.672 Difference € € -16.837.329 Difference % -4,83% Expenditure level (5,00) Level on 0:10 scale Service level (7,00) Level on 0:10 scale	Local Police Population 31/12/2018 1.395.980 Historical expenditure € 215.535.184 Standard expenditure € 190.311.451 Difference € +25.623.734 Difference % +13,46% Expenditure level (7,00) Level on 0:10 scale Service level (5,00) Level on 0:10 scale	Local Police Population 31/12/2018 954.318 Historical expenditure € 90.767.628 Standard expenditure € 124.598.800 Difference € € -33.831.172 Difference % -27,15% Expenditure level (4,00) Level on 0:10 scale Service level (4,00) Level on 0:10 scale	Local Police Population 31/12/2018 860.753 Historical expenditure € 97.770.373 Standard expenditure € 101.598.514 Differenza € -3.828.141 Differenza % -3,77% Expenditure level (5,00) Level on 0:10 scale Service level (6,00) Level on 0:10 scale

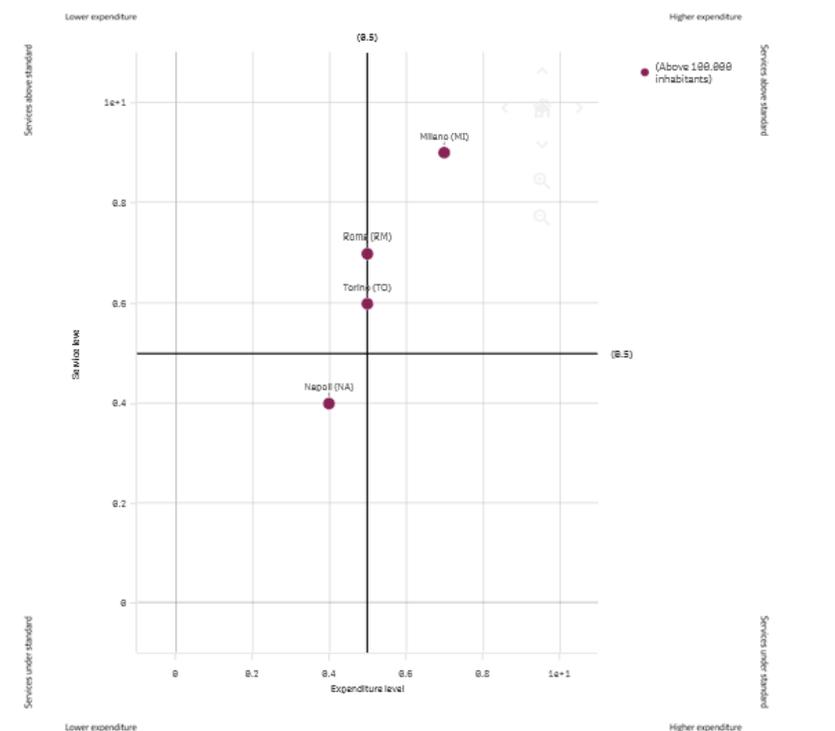
Indicator - Local Police

Indicator	Comune di Roma (RM)	Comune di Milano (MI)	Comune di Napoli (NA)	Comune di Torino (TO)
Standard expenditure - Euro per Inhabitant	123,68	136,33	138,56	118,29
Standard expenditure - Euro	348.751.671,89	198.311.450,68	124.598.800,71	101.598.513,55
Historical expenditure - Euro per Inhabitant	117,71	154,68	95,11	113,58
Historical expenditure - Euro	331.954.342,72	215.935.184,24	90.767.627,88	97.770.371,61
Overall level of services provided - No. per 1000 Inhabitants	8,372,22	12,493,43	3,179,02	6,416,94
Historical vs Standard service level - %	59,87	123,94	-43,22	15,82
Average labour cost - Euro per employee	49.494,78	52.796,26	42.839,86	49.339,46
Average labour cost - Euro per Inhabitant	181,18	116,85	75,61	99,13

2018 Previous years REMOVE SELECTION

Municipality or aggregate

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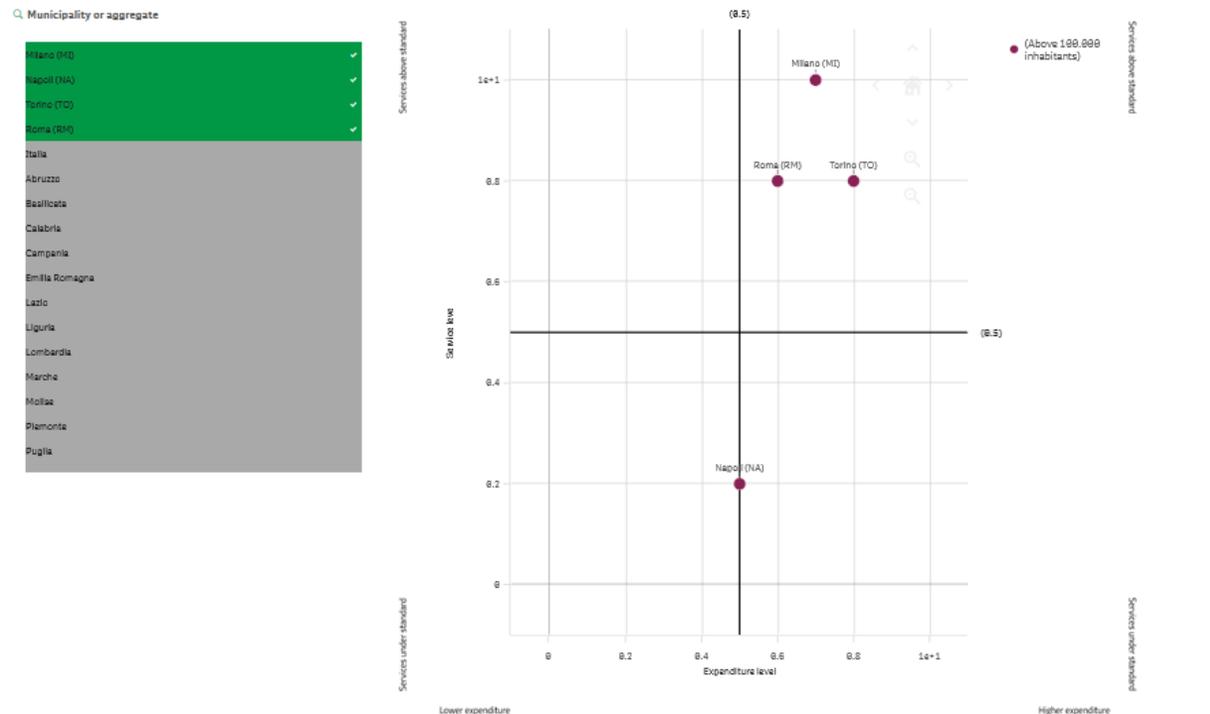
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Education Population 31/12/2018 2.820.215 Historical expenditure € 401.243.663 Standard expenditure € 378.671.323 Difference € € +22.572.340 Difference % +5,96% Expenditure level (6,00) Level on 0-10 scale Service level (8,00) Level on 0-10 scale	Education Population 31/12/2018 1.355.580 Historical expenditure € 238.766.520 Standard expenditure € 202.746.359 Difference € +36.020.122 Difference % +17,77% Expenditure level (7,00) Level on 0-10 scale Service level (10,00) Level on 0-10 scale	Education Population 31/12/2018 954.318 Historical expenditure € 77.248.425 Standard expenditure € 86.471.713 Difference € € -9.223.289 Difference % -10,67% Expenditure level (5,00) Level on 0-10 scale Service level (2,00) Level on 0-10 scale	Education Population 31/12/2018 860.753 Historical expenditure € 121.422.453 Standard expenditure € 97.942.560 Differenza € +23.479.893 Differenza % +23,97% Expenditure level (8,00) Level on 0-10 scale Service level (8,00) Level on 0-10 scale

Indicator - Education

Indicator	▲	Q	Comune di Roma (RM)	Comune di Milano (MI)	Comune di Napoli (NA)	Comune di Torino (TO)
Standard expenditure - Euro per Inhabitant			134,27	145,24	99,61	113,78
Standard expenditure - Euro			378.671.323,48	202.746.359,51	86.471.713,44	97.942.559,84
Historical expenditure - Euro per Inhabitant			142,27	171,84	82,95	141,95
Historical expenditure - Euro			401.243.663,39	238.766.520,34	77.248.424,54	121.422.453,91
Overall level of services provided - No. per 1000 Inhabitants			45,28	55,23	18,58 Normalized value	49,92
Historical vs Standard service level - %			31,74	60,36	-58,97	31,93
Average labour cost - Euro per employee			38.426,61	39.147,61	41.928,11	30.709,06
Average labour cost - Euro per Inhabitant			67,84	81,38	26,68	63,96

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Municipality of Roma (Rm)	Municipality of Milano (Mi)	Municipality of Napoli (Na)	Municipality of Torino (To)
<p>Public Roads and Planning</p> <p>Population 31/12/2018 2.820.219</p> <p>Historical expenditure € 298.733.693</p> <p>Standard expenditure € 217.752.065</p> <p>Difference € € +80.981.628</p> <p>Difference % +37,15%</p> <p>Expenditure level 9,00 Level on 0-10 scale</p> <p>Service level 2,00 Level on 0-10 scale</p>	<p>Public Roads and Planning</p> <p>Population 31/12/2018 1.395.980</p> <p>Historical expenditure € 135.461.887</p> <p>Standard expenditure € 111.203.251</p> <p>Difference € € +24.258.636</p> <p>Difference % +21,81%</p> <p>Expenditure level 8,00 Level on 0-10 scale</p> <p>Service level 3,00 Level on 0-10 scale</p>	<p>Public Roads and Planning</p> <p>Population 31/12/2018 954.318</p> <p>Historical expenditure € 95.574.237</p> <p>Standard expenditure € 66.086.785</p> <p>Difference € € +29.487.452</p> <p>Difference % +44,62%</p> <p>Expenditure level 5,00 Level on 0-10 scale</p> <p>Service level 10,00 Level on 0-10 scale</p>	<p>Public Roads and Planning</p> <p>Population 31/12/2018 860.793</p> <p>Historical expenditure € 72.118.783</p> <p>Standard expenditure € 66.776.377</p> <p>Differenza € +5.341.806</p> <p>Differenza % +8,00%</p> <p>Expenditure level 7,00 Level on 0-10 scale</p> <p>Service level 3,00 Level on 0-10 scale</p>

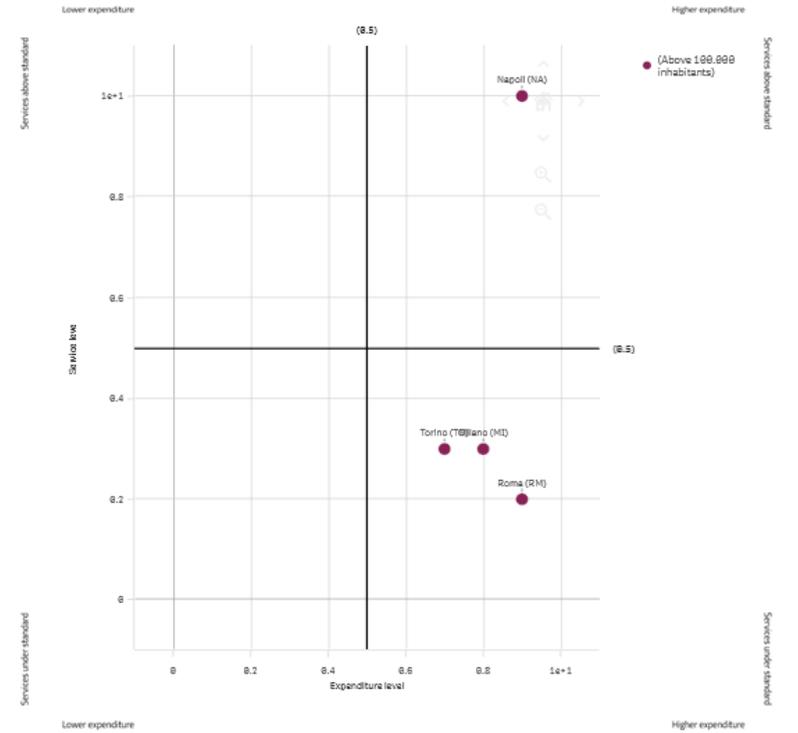
Indicator - Public Roads and Planning

Indicator	Comune di Roma (RM)	Comune di Milano (MI)	Comune di Napoli (NA)	Comune di Torino (TO)
Average labour cost - Euro per Inhabitant				
NON SI TRADUCE	Historical Expenditure from questionnaire	Historical expenditure from the questionnaire and from Final budget accounts	Historical Expenditure from questionnaire	Historical expenditure from the questionnaire and from Final budget accounts
Standard expenditure - Euro per Inhabitant	77,21	79,66	69,25	77,68
Standard expenditure - Euro	217.752.064,84	111.203.251,39	66.086.784,89	66.776.376,64
Historical expenditure - Euro per Inhabitant	169,93	97,84	108,15	83,78
Historical expenditure - Euro	298.733.692,81	135.461.886,88	95.574.237,28	72.118.782,98
Overall level of services provided - No. per 1000	318,24	471,39	1.047,25	413,13

2018 Previous years REMOVE SELECTION

Municipality or aggregate

- Milano (MI)
- Napoli (NA)
- Torino (TO)
- Roma (RM)
- Italia
- Abruzzo
- Basilicata
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FUNCTIONS: WASTE MANAGEMENT, CENTRAL GENERAL SERVICES, LOCAL POLICE, EDUCATION, PUBLIC ROADS AND PLANNING, SOCIAL CARE AND NURSERY SERVICES

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|---|---|---|---|
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| Waste Management | Waste Management | Waste Management | Waste Management |
| Population 31/12/2018
2.820.215 | Population 31/12/2018
1.395.980 | Population 31/12/2018
954.318 | Population 31/12/2018
860.753 |
| Historical expenditure
€ 789.587.283 | Historical expenditure
€ 300.754.846 | Historical expenditure
€ 229.271.255 | Historical expenditure
€ 205.056.722 |
| Standard expenditure
€ 817.316.397 | Standard expenditure
€ 305.965.694 | Standard expenditure
€ 240.556.628 | Standard expenditure
€ 209.064.384 |
| Difference €
€ -27.729.114 | Difference
€ -5.210.848 | Difference €
€ -11.285.373 | Differenza
€ -4.007.662 |
| Difference %
-3,39% | Difference %
-1,70% | Difference %
-4,69% | Differenza %
-1,92% |
| Expenditure level
5/5 (5,00)
Level on 0-10 scale | Expenditure level
5/5 (5,00)
Level on 0-10 scale | Expenditure level
4/5 (4,00)
Level on 0-10 scale | Expenditure level
4/5 (4,00)
Level on 0-10 scale |
| Service level
3/3 (3,00)
Level on 0-10 scale | Service level
6/6 (6,00)
Level on 0-10 scale | Service level
2/2 (2,00)
Level on 0-10 scale | Service level
4/4 (4,00)
Level on 0-10 scale |

Indicator - Waste Management

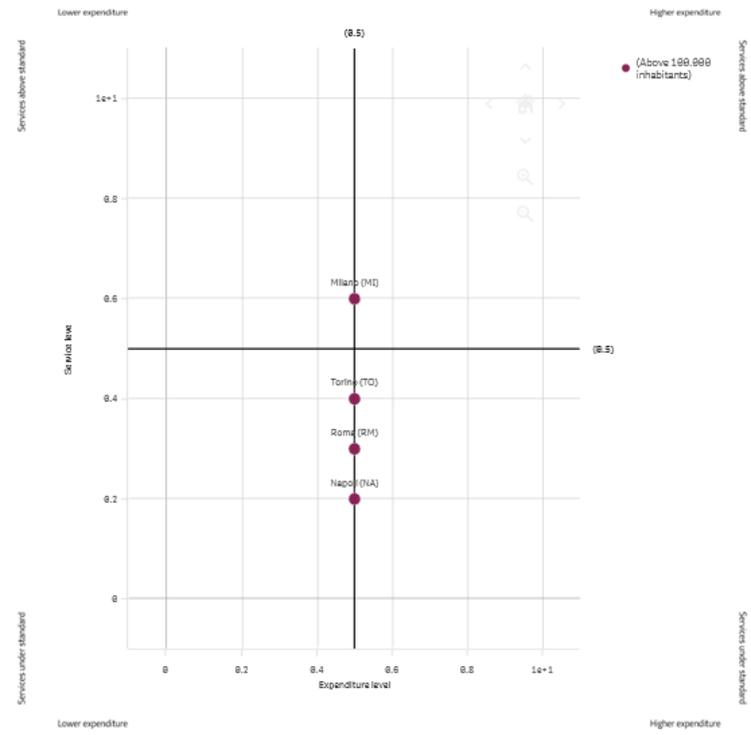
Indicator	Comune di Roma (RM)	Comune di Milano (MI)	Comune di Napoli (NA)	Comune di Torino (TO)
Standard expenditure - Euro per Inhabitant	289,81	219,18	252,97	242,87
Standard expenditure - Euro	817.316.397,39	385.965.694,81	240.556.628,22	209.064.383,98
Historical expenditure - Euro per Inhabitant	279,97	215,44	248,25	238,22
Historical expenditure - Euro	789.587.282,85	300.754.846,79	229.271.254,79	205.056.722,89
Waste collected for recycling - %	49,69	58,84	35,99	46,58
Historical vs Standard service level - %	-21,89	4,92	-35,82	-16,94
Tons of waste produced - Kg per Inhabitant	612,87	495,87	529,33	523,32
Associated management / waste management - YES/NO	No	No	No	No

FUNCTIONS: WASTE MANAGEMENT, CENTRAL GENERAL SERVICES, LOCAL POLICE, EDUCATION, PUBLIC ROADS AND PLANNING, SOCIAL CARE AND NURSERY SERVICES

2018 Previous years REMOVE SELECTION

Q Municipality or aggregate

- Milano (MI)
- Napoli (NA)
- Torino (TO)
- Roma (RM)
- Italia
- Abruzzo
- Basilicata
- Calabria
- Campania
- Emilia Romagna
- Lazio
- Liguria
- Lombardia
- Marche
- Molise
- Piemonte
- Puglia



Municipalities are visualised only if they are assessable in terms of expenditure and services provided.

Municipalities are positioned in four quadrants based on the expenditure level and the quantity of services provided. Aggregating the two dimensions:

- Municipalities in the lower right quadrant record a historical expenditure higher than standard and offer a lower service level than the average of municipalities with the same number of inhabitants. On the opposite side, municipalities in the top left quadrant record a historical expenditure lower than the standard and a service level higher than the average of municipalities with the same number of inhabitants;
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2018 Previous years REMOVE SELECTION

The elaborations starting from 2017 are not always comparable between the different years as a result of methodological changes that have occurred in some functions. The changes are reported in the methodological notes published in the project section.

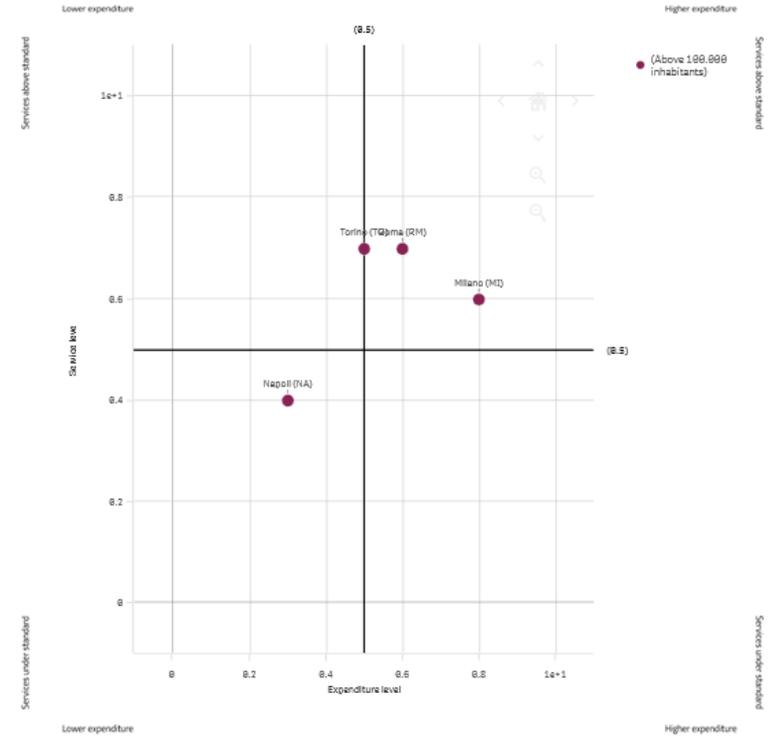
Select a municipality or an aggregate	Select a municipality or an aggregate	Select a municipality or an aggregate	Select a municipality or an aggregate
Municipality of Roma (Rm)	Municipality of Milano (Mi)	Municipality of Napoli (Na)	Municipality of Torino (To)
<p>Social care and nursery services Population 31/12/2018 2.820.219</p> <p>Historical expenditure € 639.507.314</p> <p>Standard expenditure € 635.435.161</p> <p>Difference € € +4.072.153</p> <p>Difference % +0,64%</p> <p>Expenditure level 6,00 Level on 0-10 scale</p> <p>Service level 7,00 Level on 0-10 scale</p>	<p>Social care and nursery services Population 31/12/2018 1.395.980</p> <p>Historical expenditure € 405.282.745</p> <p>Standard expenditure € 307.057.113</p> <p>Difference € € +98.225.632</p> <p>Difference % +31,99%</p> <p>Expenditure level 8,00 Level on 0-10 scale</p> <p>Service level 6,00 Level on 0-10 scale</p>	<p>Social care and nursery services Population 31/12/2018 954.318</p> <p>Historical expenditure € 106.491.002</p> <p>Standard expenditure € 178.325.900</p> <p>Difference € € -71.834.898</p> <p>Difference % -40,28%</p> <p>Expenditure level 5,00 Level on 0-10 scale</p> <p>Service level 4,00 Level on 0-10 scale</p>	<p>Social care and nursery services Population 31/12/2018 860.793</p> <p>Historical expenditure € 185.472.709</p> <p>Standard expenditure € 186.174.347</p> <p>Differenza € -701.638</p> <p>Differenza % -0,38%</p> <p>Expenditure level 5,00 Level on 0-10 scale</p> <p>Service level 7,00 Level on 0-10 scale</p>

Indicator - Social care and nursery services

Indicator	Comune di Roma (RM)	Comune di Milano (MI)	Comune di Napoli (NA)	Comune di Torino (TO)
Historical expenditure - Euro	639.507.314,40	405.282.745,88	106.491.001,72	185.472.709,81
Historical expenditure - Euro per Inhabitant	226,76	290,32	111,59	215,47
Standard expenditure - Euro	635.435.161,85	307.057.113,38	178.325.899,59	186.174.347,28
Standard expenditure - Euro per Inhabitant	225,31	219,96	186,86	215,28
Historical expenditure - Social services net of Nursery services - Euro	498.691.593,91	313.999.722,48	94.696.529,44	145.937.137,26
Historical expenditure - Social services net of Nursery services - Euro per Inhabitant	159,98	224,44	99,23	169,54
Standard expenditure - Social services net of Nursery services - Euro	469.133.427,45	239.331.748,11	156.668.623,74	149.611.693,61

2018 Previous years REMOVE SELECTION

- Municipality or aggregate
- Milano (MI) ✓
 - Napoli (NA) ✓
 - Torino (TO) ✓
 - Roma (RM) ✓
 - Italia
 - Abruzzo
 - Basilicata
 - Calabria
 - Campania
 - Emilia Romagna
 - Lazio
 - Liguria
 - Lombardia
 - Marche
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The Disclosure of Data: A Growing Imperative for Local Governments

- ▶ Data is considered the raw material of the 21st century, data production in 2020 is 44 times greater than it was in 2009 (Numanovic 2017).
- ▶ The number of open data initiatives is growing in the public sector.
- ▶ By improving voter information and government accountability, data disclosure may improve fiscal decisions and the efficiency of service provision.
- ▶ But, principal-agent theory warns us that data disclosure may also cause politicians to focus too much on measured activities at the expense of unmeasured ones.

Recent Research Paper on the impact of data disclosure

CESifo
WORKING
PAPERS

10155
2022
December 2022

Does Data Disclosure Improve
Local Government
Performance? Evidence from
Italian Municipalities

Ben Lockwood, Francesco Porcelli, Michela Redoano, Antonio Schiavone

- ▶ We exploit an Italian Government's open data initiative (**OpenCivitas**), starting in 2014 and affecting municipalities in ordinary regions.
- ▶ We conduct **an empirical exercises** to identify the *extensive* margin effects of this initiative on municipal governments' spending, service provision, and efficiency
- ▶ Data disclosure does matter: positive effect on published indicators but a negative effect on the unpublished ones, spillover effects on the composition of revenues (lower taxes, higher fees), some evidence of enhanced yardstick competition.

CESifo

https://www.ifo.de/sites/default/files/docbase/docs/cesifo1_wp10155.pdf

Literature

- ▶ papers on *deliberate government data disclosure* (policy interventions or RCTs) on electoral outcomes and government policy: Ferraz (2008), Bjorkman (2009), Banerjee (2011, 2020), Pande (2011), Lockwood & Porcelli (2013), Kendall (2015), Grossman (2018), Cruz (2021)
 - Almost every work is on electoral outcomes only and/or in developing countries
 - Lockwood & Porcelli (2013) studies Comprehensive Performance Assessment, a scheme for local government in England, using Wales as a control group, incentivised output, also caused taxation to rise and efficiency to fall
- ▶ papers on the effect of (exogenous variation of) media coverage *per se* on on electoral outcomes and government policy: Besley & Burgess (2002), Stromberg (2004), Eisensee (2007), Snyder (2010), Durante (2018) etc
 - relevant as we use media coverage as an instrument for intensity of treatment

Overview of the empirical analysis

- ▶ **Extensive Margin Exercise**

Diff-in-Diff approach to estimate the impact of data disclosure on spending and output indicators, comparing municipalities in treated (ordinary) and untreated (special) regions between 2010 and 2018.

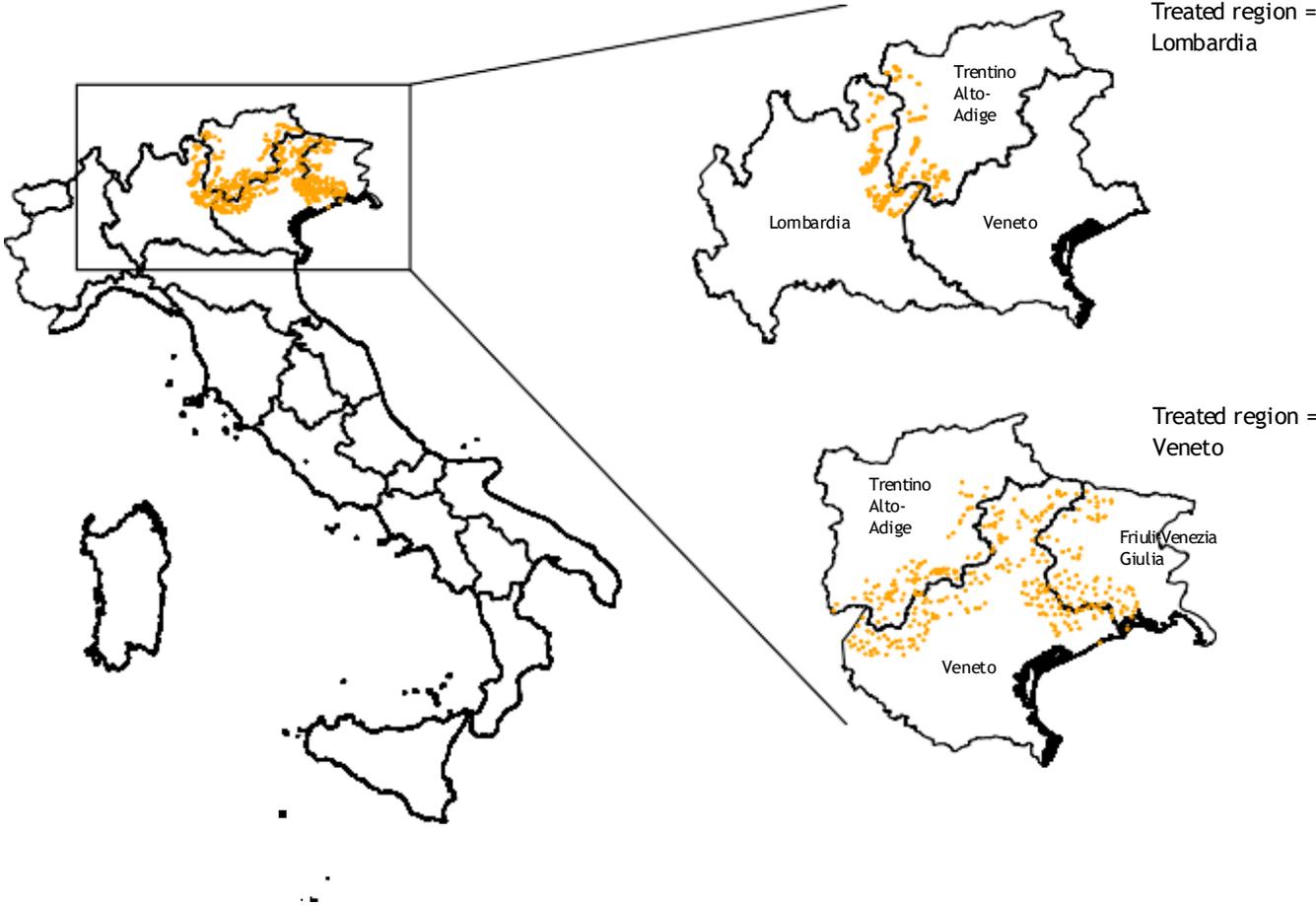
- ▶ We use homogeneous data for comparing municipalities in ordinary and special regions

- ▶ **Expenditure Per Capita** = Total Expenditure as per OpenCivitas definition, one of the indicators published by OC in 2014 (up to measurement error)

- ▶ **% of Waste Recycled** - important expenditure, > 50% of all expenditure in many cases, one of the indicators published by OC in 2016

- ▶ **Municipality Controls:** Population, Current Grants, Capital Grants

Extensive Margin Exercise: Empirical Strategy



Extensive Margin Exercise: Empirical Strategy

Diff. in Diff.

$$Y_{it} = \lambda_1 Post_t + \lambda_2 (Treat_i \times Post_t) + \alpha_i + \delta_t + \mu X_{it} + v_{it}$$

Event Study

$$Y_{it} = \sum_{t=2010}^{2018} \beta_t (Treat_i \times year_t) + \alpha_i + \delta_t + \gamma X_{it} + \epsilon_{it}$$

where

- ▶ Y = Current Expenditure, % of Waste Recycled
- ▶ X = Population, Current Grants, Capital Grants

Extensive Margin Exercise: Results

	(1)	(2)	(3)	(4)
	Veneto treated		Lombardy treated	
	Current expend.	Waste Recycl.	Current. Expend.	Waste Recycl.
Treatment effect	-42.5283** [19.510]	0.0029 [0.009]	-152.0280*** [47.422]	0.0984*** [0.018]
Control variables	Yes	Yes	Yes	Yes
Municipality, Year FE	Yes	Yes	Yes	Yes
Observations	1,804	1,804	671	671
R-squared	0.037	0.263	0.153	0.388
Municipalities	215	215	81	81

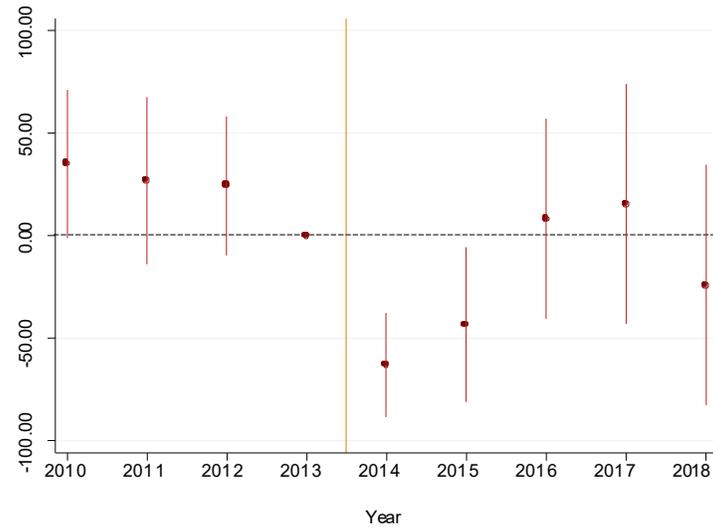
Notes: Standard errors are clustered by municipality. Time period is 2010-2018. Controls: population, current grants, capital grants.

- ▶ In Veneto (Lombardia), expenditure falls by 6% (18%) relative to the mean.
- ▶ In Lombardia, mean share of waste recycled is 0.50, so an increase of around 20%.

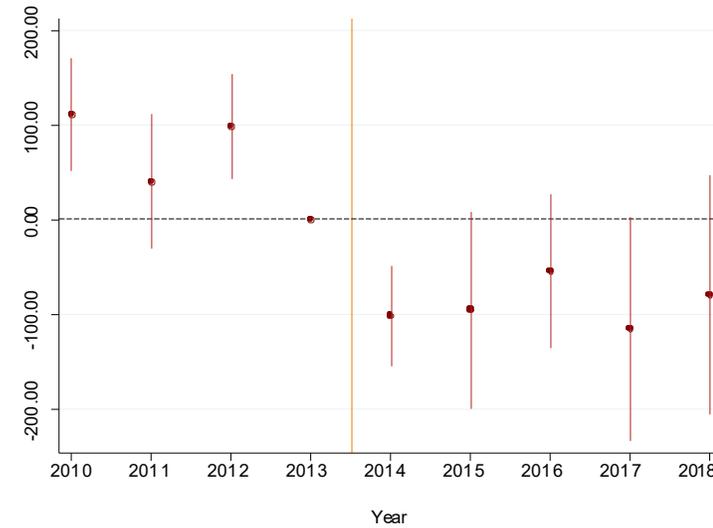
Current Expenditure Per Capita

15km

25km



(a) Veneto



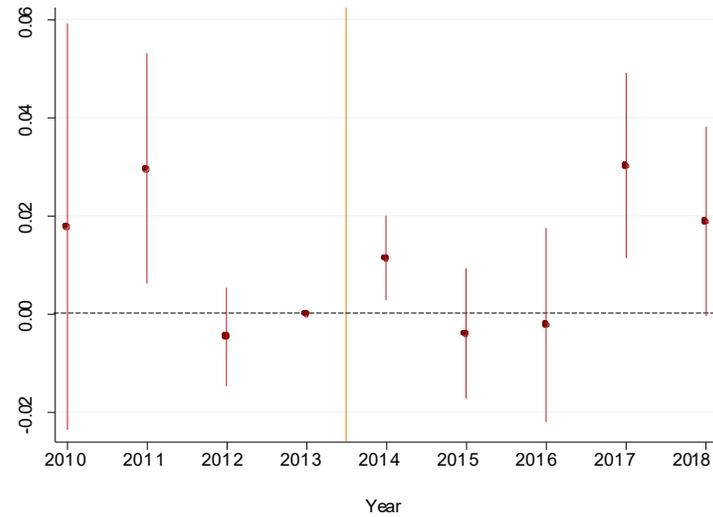
(b) Lombardy

Dynamic effects of data disclosure on per capita current expenditure by municipality and year. Standard errors are clustered by municipality.

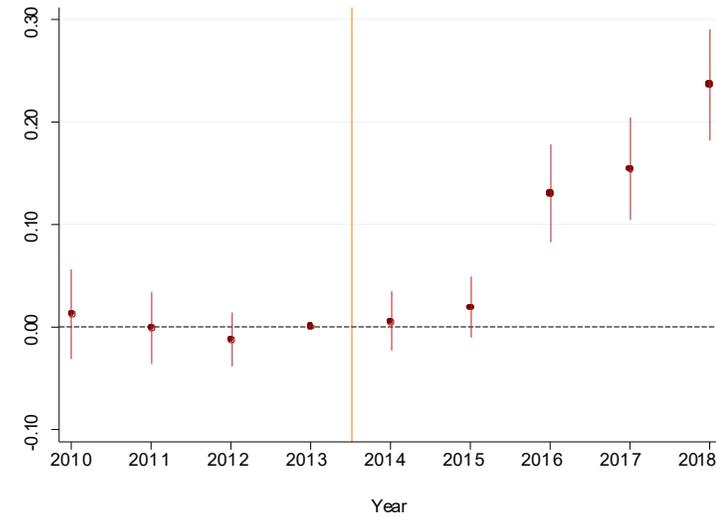
Waste Recycling

15km

25km



(a) Veneto



(b) Lombardy

Dynamic effects of data disclosure on waste recycling by municipality and year.
Standard errors are clustered by municipality.

Conclusions

- ▶ Extensive margin effect of data disclosure: Diff-in-Diff estimates show a positive impact of data disclosure on the quality of expenditure and of the share of recycled waste which follow closely timing and content of data disclosure.
- ▶ Policy implication: *careful* design of data disclosure is needed since there are negative spillovers on unpublished indicators.