

Central government's targets vs municipalities' action: Evidence from the Italian municipalities' choices on child - care provision

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Motivation /1

In many decentralized countries **centrally-designed policies** are often implemented at the **local level**

The central government sets the **targets** to be achieved and provides the necessary **funding**, but the involvement of local governments can be designed in different ways:

- sometimes decentralized authorities are bounded to implement centrally-designed policies (**delegation**)
- in other cases, they can **discretionally decide** whether and to what extent to participate in programs promoted at central level (e.g. competitive calls to assign RRF infrastructure funds to municipalities)

Especially in the latter case, poor **administrative efficiency** at local level or differences in **fiscal preferences** across local jurisdictions can jeopardize the achievement of the targets set by the central government

Motivation /2

This issue can be investigated by referring to a policy recently launched in Italy in the field of **child-care**

From 2022 the government has appropriated **additional grants** to municipalities specifically **earmarked** to the enhancement of **nursery services** consistently with a **national target** centrally set

Data show that the extent to which single municipalities actually employed these funds was **largely differentiated**, resulting in a marked deviation in the increase of nursery places compared to what was planned at central level

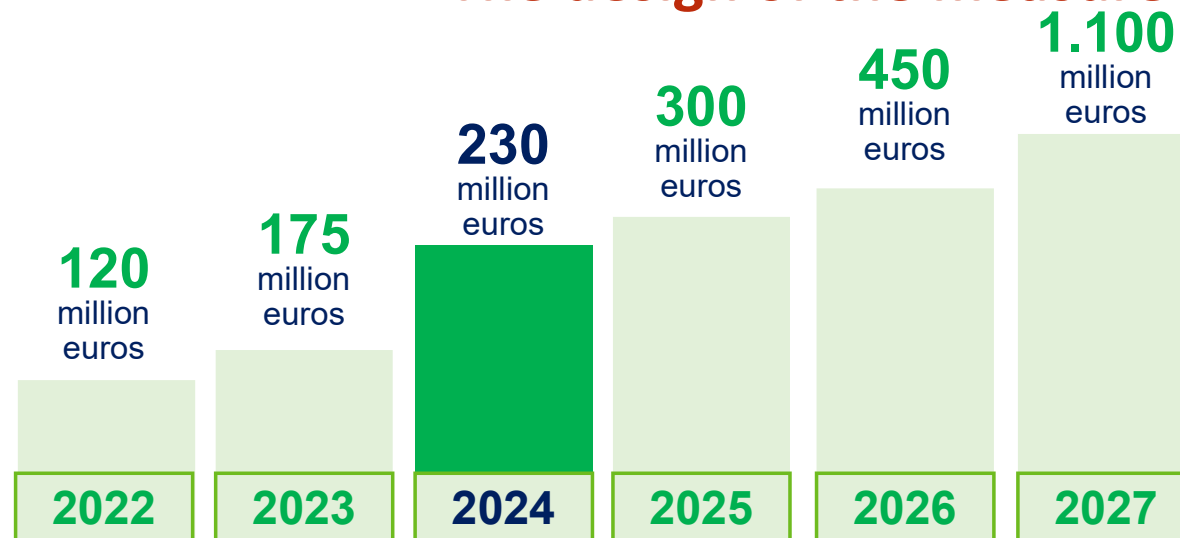
The aim of this paper is to investigate the **determinants of the choices** of different municipalities in actually making use of the central government funds and, building on these results, to possibly suggest how to review the design of this measure

The design of the measure /1

In 2022 the Italian government introduced a special program of transfers to municipalities (in Ordinary Regions plus Sicily and Sardinia) to cover the **current expenditure** required to **increase the provision of nursery places** (in parallel with the Recovery and Resilience Facility for infrastructure investments in new nursery schools)

- A **national standard** was established: in each municipality, public and private facilities must provide nursery places such as to achieve a coverage rate of resident children aged 0-2 of **at least 33%** by 2027
- From 2022 **increasing resources** have been specifically allocated up to 1.1 billion euros from 2027. These resources should be sufficient to **fill the gap** between the nursery places measured in the reference year (2018) and those necessary to reach the final target of 33% coverage rate in 2027 (as valued at the standard cost of 7,670 euros for each new place)

The design of the measure /2



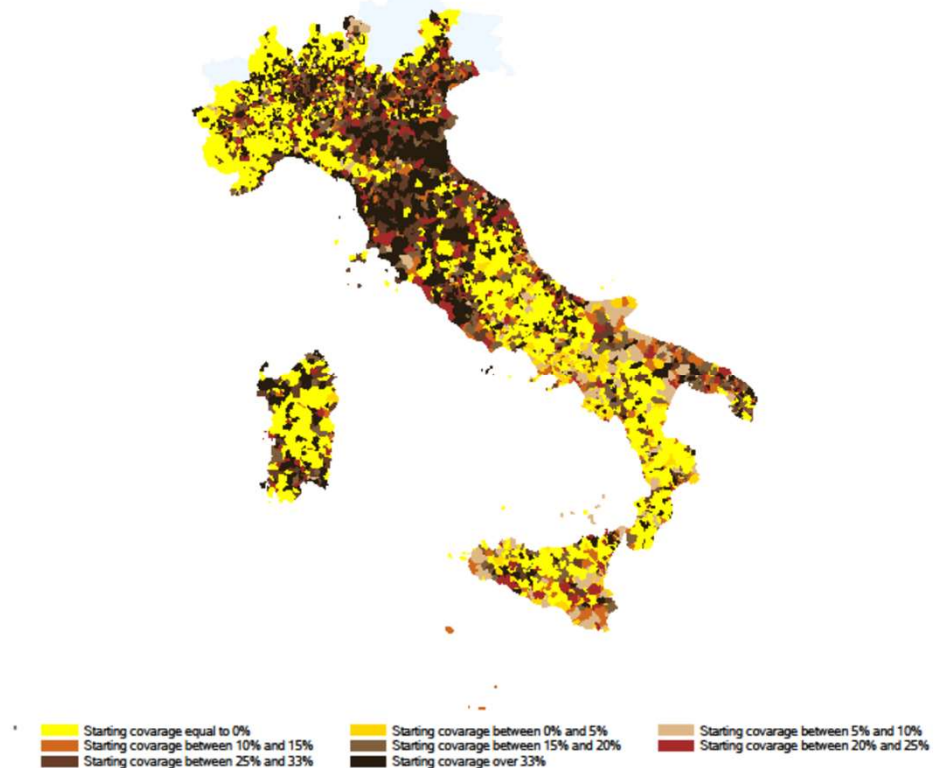
The 2021 Budget Law (Paragraph 791, art. 1, of Law 178/20 and paragraph 563, art.1, of Law 234/2021) establishes the amount of resources provided annually for the enhancement of the nursery service

	2022	2023	2024	2025	2026	from 2027
Additional resources (millions of euros)	120	175	230	300	450	1,100
Targets (additional nursery places)	15,639	22,822	29,987	39,113	58,670	143,416
Reduction in the coverage gap to 33%	14%	20%	27%	35%	53%	100%

The design of the measure /3

- The allocation of total resources available year by year across municipalities follows a clear **catching up** aim: funds are assigned **proportionally to the gap** of nursery places in the reference year (2018) compared to 33% coverage target to be met everywhere in 2027
- These transfers are **earmarked** to fund the current expenditure required to increase the provision of nursery places

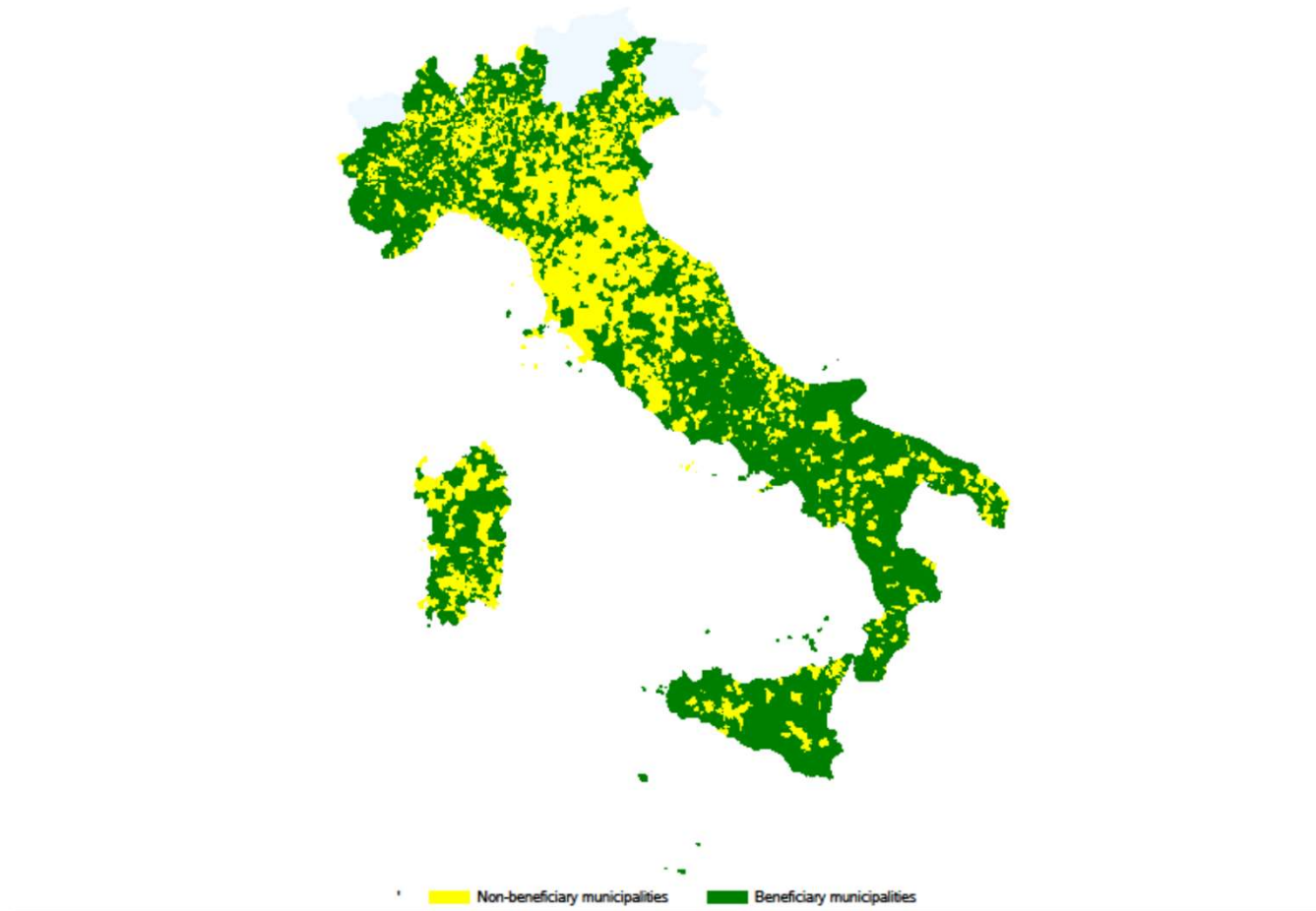
Coverage rate (public + private nursery facilities) - 2018



The design of the measure /4

- Municipalities can utilize the allocated funds to increase child-care places by choosing from a wide **array of possible arrangements**: public nurseries managed directly by the municipalities or by a union of municipalities, agreements with private nurseries, vouchers given to families to be spent in childcare services
- Municipalities are **monitored** in the use of assigned funds: year by year they are required to **report** the central government the additional nursery places actually provided that should be consistent with the assigned targets
- In the original setup of the measure, municipalities failing to reach the assigned target were sanctioned by the obligation to **return unused resources** to the central government budget. Following a recent ruling of the Italian Constitutional Court, the **sanction mechanism** has been modified since now, in the event of inertia by the Municipality, a **commissioner** is appointed to actually enforce the additional provision of nursery places

Beneficiary and non-beneficiary municipalities



The responses of the municipalities

- The **monitoring data** relating to the first-year (**2022**) implementation of the measure gives clear evidence about the **variability** in the extent to which individual municipalities have **actually used** the additional funds
- The result is a **marked deviation** in the increase of actually provided nursery places compared to **what was centrally planned**

The responses of the municipalities

				Target		Outcome		
		Number	Percentage	Number of nursery places	Assigned additional resources (millions euros)	Number of nursery places	Additional resources actually used (millions euros)	
Non-beneficiary municipalities		2,359	32.2%	0	0	0	0	
Beneficiary municipalities	"Inactive"	Non-responding	653	8.9%	1,686	12.9	507	1.5
		Failed target	2,023	27.6%	4,125	31.7	0	0.0
		Partially failed target	247	3.4%	2,169	16.6	888	6.8
	"Active"	Achieved target	753	10.3%	1,886	14.5	1,886	14.5
		Over-achieved target	1,295	17.7%	5,773	44.3	27,697	44.3
Total		7,330	100.0%	15,639	120.0	30,977	67.0	

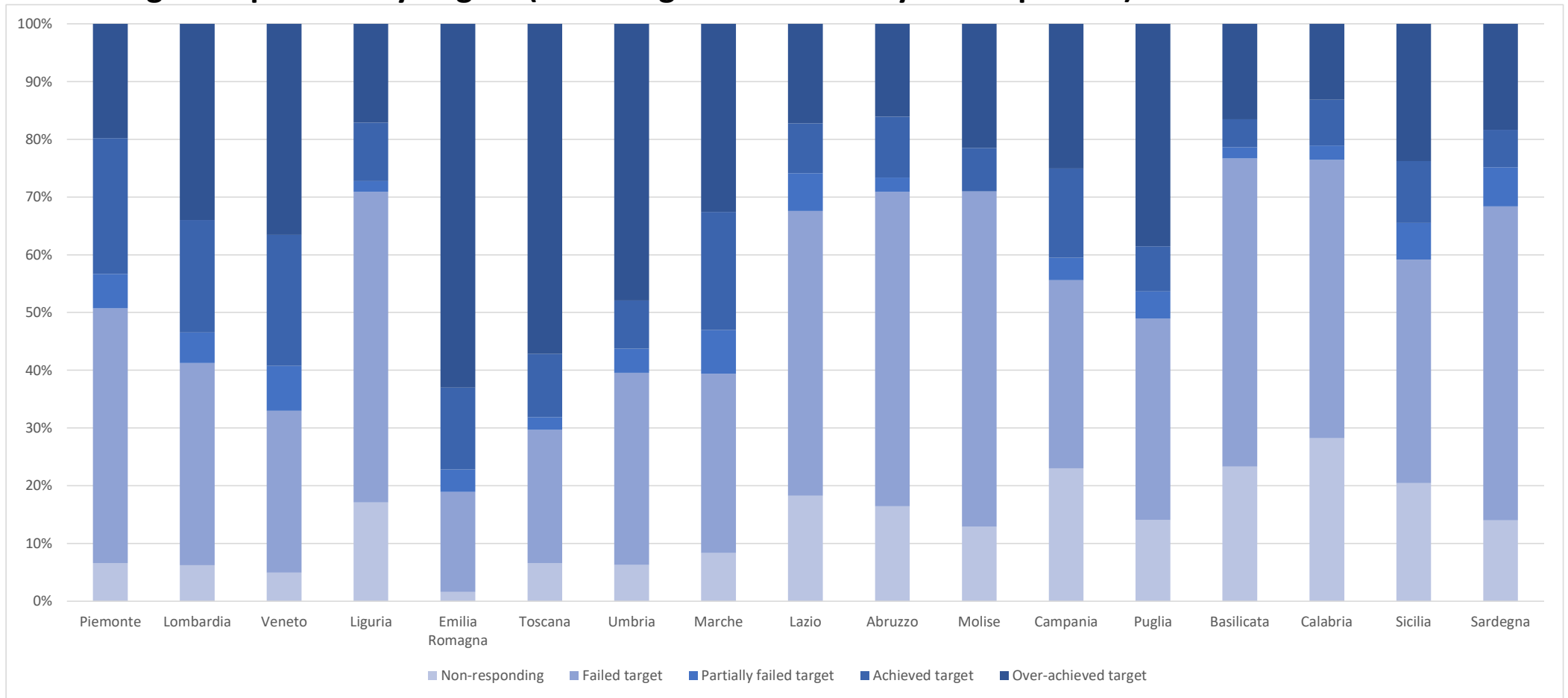
The responses of the municipalities

Percentage composition by Region

Region	Non-beneficiary municipalities (%)	Beneficiary municipalities (%)					Total (#)
		Non-responding (%)	Failed target (%)	Partially failed target (%)	Achieved target (%)	Over-achieved target (%)	
Piemonte	23.3%	5.1%	33.8%	4.6%	18.1%	15.2%	1,180
Lombardia	43.4%	3.5%	19.8%	3.0%	11.0%	19.2%	1,504
Veneto	49.9%	2.5%	14.0%	3.9%	11.4%	18.3%	563
Liguria	32.5%	11.5%	36.3%	1.3%	6.8%	11.5%	234
Emilia Romagna	61.5%	0.6%	6.7%	1.5%	5.5%	24.2%	330
Toscana	66.7%	2.2%	7.7%	0.7%	3.7%	19.0%	273
Umbria	47.8%	3.3%	17.4%	2.2%	4.3%	25.0%	92
Marche	41.3%	4.9%	18.2%	4.4%	12.0%	19.1%	225
Lazio	23.3%	14.0%	37.8%	5.0%	6.6%	13.2%	378
Abruzzo	22.3%	12.8%	42.3%	2.0%	8.2%	12.5%	305
Molise	31.6%	8.8%	39.7%	0.0%	5.1%	14.7%	136
Campania	10.7%	20.5%	29.1%	3.5%	13.8%	22.4%	550
Puglia	25.3%	10.5%	26.1%	3.5%	5.8%	28.8%	257
Basilicata	21.4%	18.3%	42.0%	1.5%	3.8%	13.0%	131
Calabria	9.7%	25.5%	43.6%	2.2%	7.2%	11.9%	404
Sicilia	16.1%	17.1%	32.5%	5.4%	9.0%	19.9%	391
Sardegna	26.3%	10.3%	40.1%	5.0%	4.8%	13.5%	377
Total Regions (%)	32.2%	8.9%	27.6%	3.4%	10.3%	17.7%	7,330
Total (#)	2,359	653	2,023	247	753	1,295	7,330

The responses of the municipalities

Percentage composition by Region (excluding non-beneficiary municipalities)



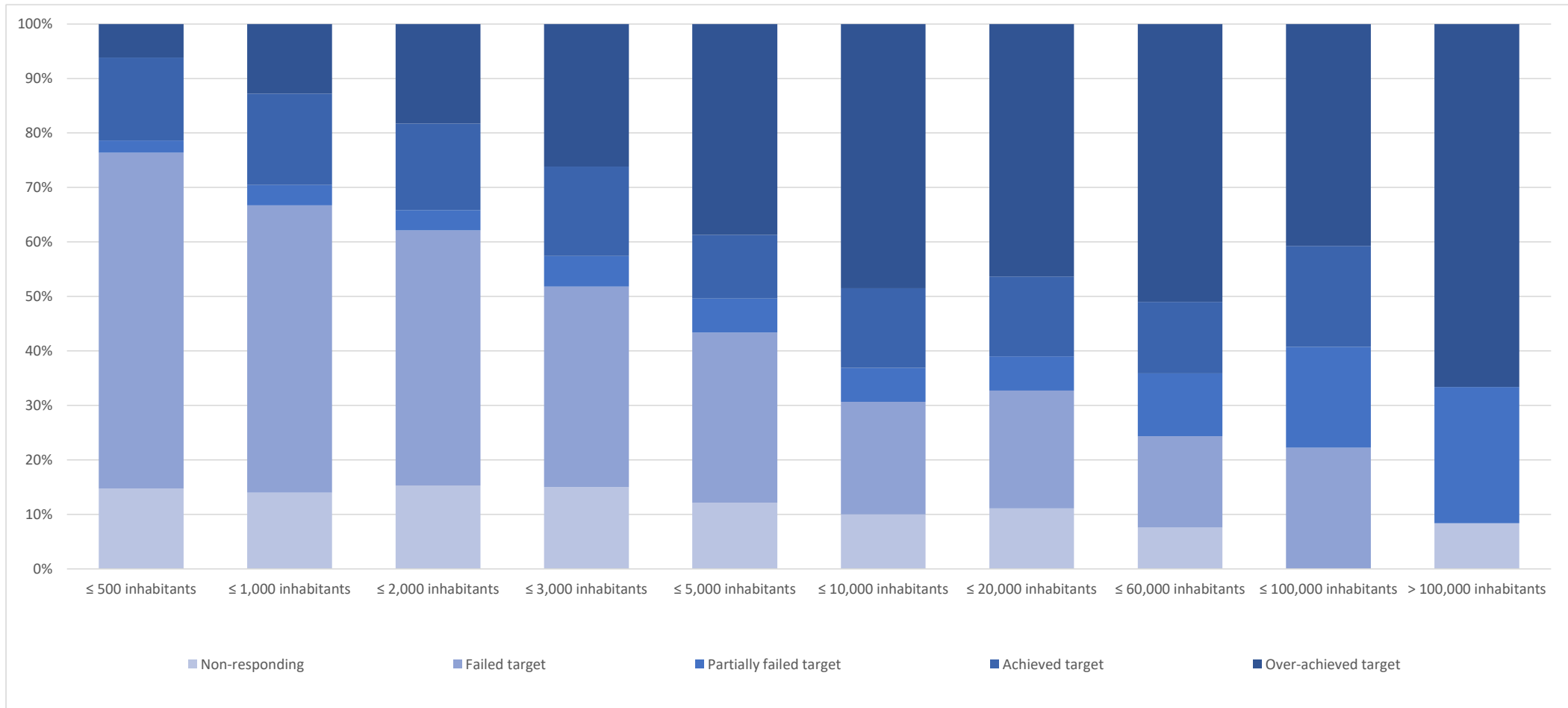
The responses of the municipalities

Percentage composition by demographic size

Demographic size	Non-beneficiary municipalities (%)	Beneficiary municipalities (%)					Total (#)
		Non-responding (%)	Failed target (%)	Partially failed target (%)	Achieved target (%)	Over-achieved target (%)	
≤ 500 inhabitants	3.8%	14.2%	59.3%	2.2%	14.6%	5.9%	826
≤ 1,000 inhabitants	15.0%	11.9%	44.8%	3.2%	14.2%	10.9%	1,011
≤ 2,000 inhabitants	25.4%	11.4%	34.9%	2.8%	11.8%	13.6%	1,395
≤ 3,000 inhabitants	41.7%	8.7%	21.5%	3.3%	9.6%	15.3%	825
≤ 5,000 inhabitants	50.7%	6.0%	15.4%	3.1%	5.8%	19.1%	1,006
≤ 10,000 inhabitants	46.0%	5.4%	11.2%	3.4%	7.9%	26.2%	1,099
≤ 20,000 inhabitants	37.9%	6.9%	13.4%	3.9%	9.1%	28.8%	670
≤ 60,000 inhabitants	37.9%	4.7%	10.4%	7.2%	8.2%	31.7%	404
≤ 100,000 inhabitants	49.1%	0.0%	11.3%	9.4%	9.4%	20.8%	53
> 100,000 inhabitants	70.7%	2.4%	0.0%	7.3%	0.0%	19.5%	41
Total demographic groups (%)	32.2%	8.9%	27.6%	3.4%	10.3%	17.7%	7,330
Total (#)	2,359	653	2,023	247	753	1,295	7,330

The responses of the municipalities

Percentage composition by demographic size (excluding non-beneficiary municipalities)



Child-care needs and responses of the municipalities

Coverage rate of resident children aged 0-2 (2018)	Inactive municipalities ("non responding" or "failed target" or "partially failed target")		Active municipalities ("achieved target" or "over-achieved target")	
	#	%	#	%
0%	2,283	69.1	1,023	30.9
0% - 5%	141	56.2	110	43.8
5% - 10%	127	43.6	164	56.4
10% - 15%	134	40.5	197	59.5
15% - 20%	144	35.5	262	64.5
20% - 25%	73	24.7	223	75.3
> 25%	21	23.3	69	76.7
Total	2,923	58.8	2,048	41.2

Child-care current expenditure program and RRF infrastructure investment

Child-care current expenditure program

Recovery and Resilience Facility infrastructure investment



* Inactive municipalities (non-responding, partially failed target or failed target) Active municipalities (achieved target or over-achieved target)



* Inactive municipalities in RRP infrastructure program Active municipalities in RRP infrastructure program

Empirical strategy /1

What are the determinants of these different choices by municipalities?

- Cross-section structure of the dataset (7,054 observations)
- Estimation model for categorical dependent variable
- **Sample selection bias** (inconsistent estimated coefficients) → **Selection model** (“Beneficiary” vs “Non-beneficiary” municipalities) to derive a Heckman-type correction in the case of dichotomous dependent variable

Outcome model: Sample corrected probit estimation

$$Y_i = \beta_0 + \beta_1' D_i + \beta_2' S_i + \beta_3' Clusters_i + \epsilon_i$$

$Y_i = 0$ if “Inactive” municipality (“Non-responding” or “Failed target” or “Partially failed target”)

$= 1$ if “Active” municipality (“Achieved target” or “Over-achieved target”)

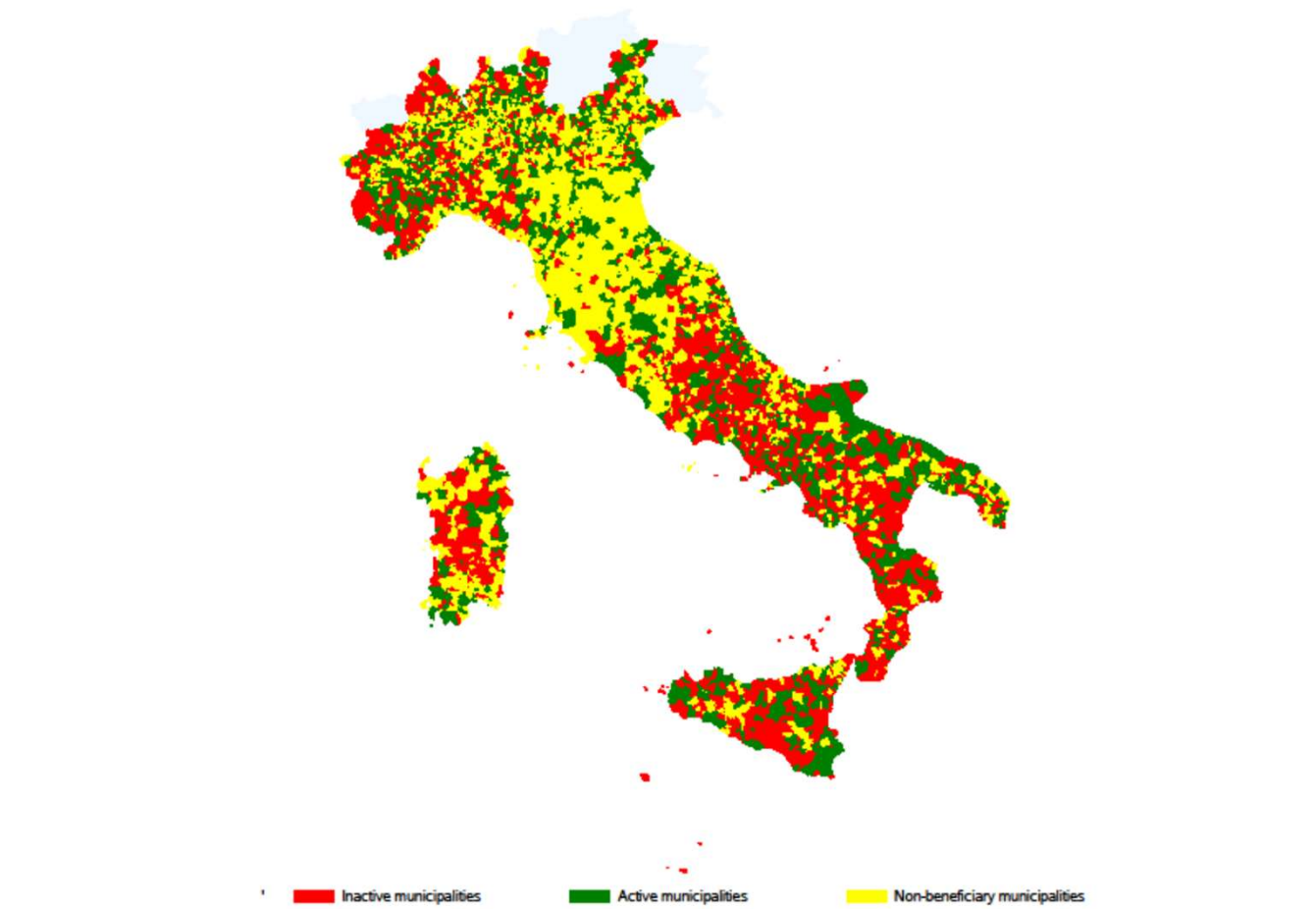
Empirical strategy /2

- D_i : vector of variables affecting the **demand** of child-care services: **local labor market, average income, composition of local population**
- S_i : vector of variables affecting the **supply** of child-care services at municipal level: municipal government **financial health, participation to RRF program** for infrastructure investments in new nursery schools, minimum number of children 0-2 required to manage a nursery school (“**threshold effect**”)
- $Clusters_i$: dummy that aggregate municipalities in 10 **homogeneous groups**, official clustering adopted in the specification of the standard expenditure needs models
- ϵ_i : error component

Summary statistics

	Obs	Mean	Std. Dev.	Min	Max
Dependent variables					
inactive municipalities (dummy)	2812	0.40	1.32	0.00	1.00
active municipalities (dummy)	1981	0.28	1.21	0.00	1.00
non beneficiary municipalities (dummy)	2261	0.32	2.12	0.00	1.00
Demand variables					
Income (euro per taxpayer)	7054	18293	3846	6774	48507
foreign pop %	7054	6.80	4.28	0.00	38.27
female unemployment %	7054	11.93	6.33	4.51	31.06
retired %	7054	35.18	8.33	13.28	83.01
single %	7054	16.09	2.06	3.14	31.18
Supply variables					
threshold effect (<6), dummy	7054	0.10	2.23	0.00	1.00
RRF first-round participation (dummy)	7054	0.24	1.24	0.00	1.00
financial rating index (1-5)	7054	3.40	1.13	1.00	5.00
structural current equilibrium (ratio)	7054	1.02	0.09	-0.03	2.68
use of cash in advance (ratio)	7054	0.01	0.04	0.00	0.38

The responses of the municipalities



Outcome model - Estimation results

	Estimate	Std.Error	z-value	Pr(> z)
Intercept	-0.73001	0.41163	-1.773	0.076
Female unemployment <i>p</i>	-0.01514	0.00483	-3.133	0.002 **
Average income	0.04905	0.00853	5.748	0 ***
Foreign population <i>p</i>	-0.00255	0.00509	-0.502	0.616
Retirees <i>p</i>	-0.00172	0.00312	-0.551	0.582
Unmarried 25.54_ <i>p</i>	-0.02727	0.00963	-2.833	0.005 **
Municipality rating	0.0078	0.02692	0.29	0.772
Current balance account	0.13805	0.25885	0.533	0.594
Cash advances	0.19823	0.54601	0.363	0.717
Public funding	0.2695	0.05126	5.258	0 ***
Special funding (NGEU-NRRP)	0.34825	0.05481	6.354	0 ***
Threshold effect (under_6)	-0.37926	0.07092	-5.348	0 ***
CLUSTER1	0.08688	0.18038	0.482	0.63
CLUSTER2	0.07716	0.12338	0.625	0.532
CLUSTER3	0.14187	0.11745	1.208	0.227
CLUSTER4	0.28289	0.13181	2.146	0.032 *
CLUSTER6	0.31167	0.14241	2.189	0.029 *
CLUSTER7	0.23476	0.14222	1.651	0.099
CLUSTER8	0.10674	0.12133	0.88	0.379
CLUSTER9	-0.04702	0.1376	-0.342	0.733
CLUSTER10	0.21656	0.13831	1.566	0.117

Concluding remarks /1

In the first year of implementation, municipalities **less active** in using central government funds are those where:

- the **demand** for child-care services is **weak**: high female unemployment, low average income
- the number of children is below a **minimum threshold** for the activation of the services
- the **gap with the national standard** is larger

Moreover, strong similarities between the choices of municipalities in exploiting central government funds to cover the **current expenditure** and their participation in Recovery and Resilience Facility tenders for **infrastructure investments** (evidence of correlation but not causation)

Concluding remarks /2

These outcomes have to be confirmed by the monitoring results for the **following years** when:

- the municipalities will be able to take advantage of the **experience** of the first year and will have more time to work out solutions to increase child-care services provision
- the **new sanction regime**, based on the appointment of a **commissioner**, will be effectively applied, possibly spurring municipalities to be more active in using central government funds

Thank you!