

A survey-based Impact Evaluation of NRRP
on Italian municipalities
— Policy brief B—

**Evaluating the Italian NRRP at the Municipal Level:
Municipal Capacity, Criticalities and Policy
Implications for Future Governance**

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Introduction

This policy brief presents and discusses, from a policy perspective, selected empirical evidence emerging from the project “A Survey-based Impact Evaluation of NRRP on Italian Municipalities.” The project investigates municipal participation in and implementation of Italy’s National Recovery and Resilience Plan (NRRP), assessing its spatial distribution and its impact on territorial development, the modernisation of local public administration, and citizens’ well-being.

Among the various determinants analysed, particular attention has been devoted to the administrative capacity of local governments and to the criticalities encountered by municipalities throughout the different phases of the NRRP cycle. This policy brief concentrates on these two interrelated dimensions.

The analysis combines two complementary sources of evidence. First, it draws on administrative data on NRRP projects and on a multidimensional measure of local government capacity inspired by the conceptual framework developed by Cerqua et al. (2025). In line with their Municipal Administrative Quality Index (MAQI), we interpret administrative capacity as a dual construct composed of a bureaucratic pillar and a political pillar.¹

Second, the report builds on original survey evidence collected from Italian municipalities within the NRRP Survey project. Municipal respondents assessed, through structured and graded items, the relevance and severity of specific factors potentially affecting NRRP participation.

This integrated empirical strategy allows us to move beyond a purely structural view of administrative capacity. While the MAQI framework provides a systematic measure of institutional quality, the survey evidence captures self-reported criticali-

ties and operational bottlenecks experienced during the NRRP cycle. By combining structural indicators with survey-based evidence on critical events, the report offers a coherent basis for interpreting both participation patterns and implementation dynamics.

This policy brief is addressed to policy-makers, public administrators, national and European institutions, and stakeholders involved in the design and evaluation of territorial development policies, with the aim of contributing to the debate on strengthening local administrative capacity and improving the territorial effectiveness of large-scale public investment programmes.

Local Government Capacity and the Spatial Diffusion of NRRP Digital Investments

The implementation of the National Recovery and Resilience Plan (NRRP), particularly under Mission 1 – Component 1 (Digitalisation of Public Administration), has placed Italian municipalities at the centre of an unprecedented investment effort. While financial resources were made widely available, participation and implementation outcomes have proven highly heterogeneous across territories.

Such heterogeneity cannot be explained solely by structural socio-economic conditions. Rather, it reflects differences in local administrative capacity, understood as the set of bureaucratic and political competences that enable municipalities to design, submit, and implement complex public investment projects.

These constitute two distinct but complementary dimensions. Bureaucratic competences primarily shape procedural compliance and project management ability, including the capacity to navigate calls, meet regulatory requirements, and manage implementation timelines. Political competences, by contrast, concern the ability of elected officials to prioritise investments, define strategic orientations,

¹The bureaucratic pillar captures administrative professionalism, organisational efficiency, and human capital within the municipal bureaucracy. The political pillar reflects leadership quality, strategic orientation, governance stability, and the effectiveness of elected officials.

and align projects with broader territorial development objectives.

Introducing the distinction between bureaucratic and political capacity allows us to interpret how specific components of municipalities' institutional endowment shape both the activation and the implementation performance of NRRP resources at the territorial level. The empirical evidence indicates that these two dimensions operate through structurally different channels, influencing participation intensity, project selection, and implementation outcomes in distinct ways.

Municipalities characterised by stronger bureaucratic capacity display a significantly higher number of approved digital projects per capita. This finding underscores the central role of administrative structures in the access phase of competitive funding schemes. A technically competent bureaucracy is better equipped to monitor funding calls in a timely manner, comply with complex procedural requirements, prepare technically sound applications within tight deadlines, and coordinate internal administrative units throughout the submission process. These organisational capabilities substantially increase the likelihood of successful participation.

However, the evidence indicates that bureaucratic capacity does not significantly affect the average funding per project. This suggests that efficient administrations tend to adopt an extensive strategy — maximising the number of projects submitted and approved — rather than necessarily pursuing fewer, larger, or more financially ambitious investments in digitalisation. In this sense, bureaucratic quality emerges as a key determinant of participation intensity, while appearing less influential in shaping project scale or financial ambition.

Political capacity operates through a different channel. Municipalities led by higher-quality political representatives tend to submit fewer projects per capita but obtain higher average funding per project. This pattern reflects a more selective and strategic approach to NRRP participation. Strong

political leadership appears to prioritise fewer but more complex and potentially transformative initiatives, concentrate resources on higher-impact investments, and align digital projects with broader territorial development strategies. In contrast to bureaucratic capacity, political capacity is associated with a shift from a quantitative to a qualitative participation strategy.

These dynamics unfold within a broader context of spatial interdependence. NRRP digital investments exhibit significant spatial effects, as municipalities adjust their behaviour in response to neighbouring jurisdictions. Yet the nature of this spatial responsiveness varies across levels of capacity. Municipalities with lower political capacity display stronger mimicking behaviour, particularly in terms of project volume, suggesting reliance on peer effects under conditions of informational or strategic uncertainty, beyond search for search for institutional legitimacy through alignment with neighbouring practices. By contrast, municipalities endowed with stronger political leadership appear less reactive to neighbouring project volumes, indicating greater strategic autonomy. Bureaucratic capacity, instead, primarily affects internal administrative throughput and does not significantly alter spatial responsiveness.

Taken together, these findings reveal differentiated implementation patterns. Municipalities with weaker administrative structures face a higher risk of under-participation, while limited political capacity may lead to reactive rather than strategic project design. Moreover, volume-based participation does not automatically translate into transformative digital upgrading. Financial allocation mechanisms alone are therefore insufficient to ensure effective territorial transformation. Without sustained investments in administrative quality and political leadership, digital convergence risks remaining uneven and dependent on external stimuli rather than endogenous capacity building.

Policy Recommendations: Towards a Dual Capacity Strategy

The evidence suggests that effective NRRP implementation requires differentiated yet complementary interventions.

- Strengthen bureaucratic capacity by stabilising technical staff, investing in project management and digital skills, simplifying procedural requirements, and fostering inter-municipal technical cooperation.
- Reinforce political capacity by enhancing strategic planning competences among local leaders, fostering evidence-based decision-making, and aligning digital investments with broader territorial development objectives.
- Shift evaluation criteria from purely quantitative participation metrics toward measures of strategic coherence and long-term impact.
- Provide structured advisory support in lower-capacity municipalities to reduce reactive participation and excessive reliance on spatial imitation.
- Integrate institutional strengthening into programme design, recognising that financial allocation alone cannot ensure territorial convergence.

A balanced strengthening of both dimensions is essential. Bureaucratic capacity ensures access and operational execution; political capacity ensures strategic coherence and long-term impact.

In the context of large-scale European programmes such as the NRRP, administrative capacity is not merely an implementation variable — it is a structural determinant of territorial transformation.

Local Government Capacity in NRRP Selection and Implementation Across Territories

The evidence emerging from digital investments provides a useful analytical foundation. When the analysis is extended to the NRRP as a whole, it is useful to distinguish between two stages of municipal engagement: participation in the programme (selection) and the intensity of implementation outcomes. Across missions and components, local government capacity continues to shape both dimensions, confirming its structural relevance within the Plan. At the same time, these effects are neither uniform nor linear: they vary across missions, reflect differences in programme design, and in some cases interact with territorial characteristics. In this broader perspective, the distinction between bureaucratic and political capacity remains analytically relevant. Municipalities' capacity operates within a complex institutional environment where multiple factors jointly influence outcomes.

Across missions, bureaucratic capacity — measured through the MAQI administrative pillar — is associated with higher implementation intensity in several components, although effects are heterogeneous and mission-specific. Stronger administrative structures enhance municipalities' ability to navigate competitive procedures, comply with regulatory requirements, and manage overlapping calls. At the same time, the magnitude and statistical robustness of these effects vary across missions. Bureaucratic capacity does not operate uniformly across the NRRP architecture; its impact depends on the procedural design and technical complexity of each component. It therefore acts primarily as an enabling operational condition — strengthening administrative readiness — rather than as a systematic driver of strategic investment orientation.

Political capacity — measured by the MAQI political pillar — is more consistently associated with NRRP outcomes at the selection stage. Across missions and components, it is positively related to the

probability of participation, indicating that higher political quality increases the likelihood of accessing at least one funded project. Its association with implementation intensity is less uniform. Although frequently significant, the coefficients are often negative, suggesting that higher political capacity does not systematically correspond to a larger number of projects or greater funding volumes once participation is secured. This pattern may indicate that municipalities with higher political capacity tend to focus on fewer, more targeted projects, rather than aiming to maximise the number of funded initiatives. Overall, political capacity appears particularly relevant for programme entry, while its role in shaping post-entry intensity is more nuanced and does not support a simple “more capacity, more volume” interpretation.

If we attempt to frame the role of the two capacity pillars in terms of a North–South dichotomy, the empirical results suggest a more nuanced picture than a simple macro-regional divide. For bureaucratic capacity, the estimated effects on implementation intensity are heterogeneous and mission-specific, and North–South equality tests reject coefficient differences only in a limited number of cases. This indicates that the marginal contribution of administrative structures does not systematically favour either macro-area. Bureaucratic quality enhances operational readiness in both North and South, but its impact depends primarily on the procedural design and technical complexity of each component rather than on geography per se. Political capacity exhibits a somewhat clearer pattern. Its association with participation — particularly in the selection stage — is more consistent across missions, and this effect is observable in both macro-areas. While isolated differences emerge in specific components, the evidence does not support a generalised narrative of a structurally stronger political effect in the North compared to the South. Overall, the data do not confirm a simple capacity-driven North–South divide. Instead, they point to a differentiated interaction between institutional capac-

ity and mission architecture, suggesting that territorial heterogeneity in NRRP outcomes is shaped less by macro-regional location alone and more by the alignment between local governance quality and programme design.

The broader NRRP evidence calls for a capacity-sensitive governance approach that recognises the differentiated roles of bureaucratic and political pillars across missions and territories.

Policy Recommendations: Capacity, Programme Design and Territorial Heterogeneity

The evidence across NRRP missions highlights the need for capacity-sensitive governance frameworks. Programme design should explicitly recognise that administrative and political capacity affect different stages of the policy process and operate heterogeneously across territorial contexts.

- Design funding mechanisms that explicitly distinguish between the selection stage and the implementation intensity stage, recognising that the determinants of access may differ from those shaping realised outcomes.
- Calibrate programme architecture to mission-specific capacity effects, acknowledging that bureaucratic readiness functions as an enabling condition whose impact depends on procedural complexity and regulatory design.
- Recognise political capacity primarily as a driver of programme access and strategic orientation, rather than assuming that higher political quality necessarily results in greater project volume or funding intensity. Operationalise this distinction through instruments that assess and incentivise strategic alignment with programme objectives — for instance, coherence statements, differentiated funding tracks based on institutional maturity, and evaluation criteria that reward integration and quality rather than quantity alone.

- Address territorial heterogeneity beyond a simple North–South divide, aligning support mechanisms with local governance quality and institutional configurations rather than macro-regional location alone.
- Embed capacity-sensitive criteria within cohesion and recovery policies to ensure coherence between programme rules and the institutional characteristics of local administrative ecosystems.

Institutional Frictions in NRRP Access and Implementation

This section reports the evidence on the critical issues encountered by municipalities in NRRP participation, based on survey responses in which local administrations expressed evaluative judgments on predefined dimensions of potential difficulty. The questionnaire included a structured set of items covering key phases of the NRRP cycle—such as procedural complexity, timing constraints, staff competences, clarity of communication, and coherence between calls and programme objectives. Respondents rated these factors along a Likert scale, indicating their perceived relevance and intensity. Table 1 presents the distribution of responses for the total sample (N = 376).

Across all items, a substantial share of municipalities reports moderate to high levels of criticality, indicating that implementation frictions are neither marginal nor isolated. Procedural complexity, timing constraints, and staff competences emerge as recurrent operational pressures, while communication clarity and coherence between calls and objectives point to more strategic and interpretative challenges.

To better structure these patterns, the five dimensions were re-parameterised and subjected to factor analysis using the subsample of 317 municipalities with complete data. Two distinct components emerge, explaining 39.5% and 20.3% of

total variance, respectively. The first component captures a *procedural dimension* of criticality, associated with procedural complexity, timing constraints, and staff competences. It highlights the operational burden and the administrative complexity imposed by NRRP implementation. The second component reflects a *substantive–strategic dimension*, linking communication clarity and coherence of calls with programme objectives, indicating interpretative and strategic challenges. Overall, the findings suggest that NRRP implementation has required significant administrative effort and institutional adaptation, revealing differences in local capacity and preparedness rather than systemic breakdowns

Subsequently, we correlated a set of 30 territorial context variables with the factor scores derived from the two dimensions of criticality identified in the analysis. Only four out of thirty variables display statistically significant correlations, indicating that implementation frictions are not systematically driven by broad structural conditions, but are instead associated with specific local socio-economic configurations.

Substantive criticalities — related to communication clarity and coherence between calls and programme objectives — are significantly more pronounced in municipalities characterised by lower entrepreneurial density and higher levels of socio-economic fragility. In these contexts, the perceived difficulty in interpreting programme objectives and aligning local proposals with broader national priorities is systematically higher. Crucially, these difficulties do not reflect a generalised shortage of administrative staff or legal-procedural competences. Rather, they point to a deficit in strategic alignment and interpretative capacity. In other words, territorial fragility should not be equated with administrative incompetence. The evidence suggests that the core challenge in these municipalities lies in connecting local development needs with the broader architecture of national policy design, rather than in basic procedural compliance.

Table 1: Reported Criticalities in NRRP Participation

Item	A	B	C	D	E	F	n.a.
L_1 Clarity of NRRP communication	25	89	130	53	15	5	59
L_2 Procedural complexity	22	75	106	78	35	4	56
L_3 Procedural timing	22	73	118	64	35	5	59
L_4 Staff competences	14	72	97	66	59	7	61
L_5 Consistency of calls with objectives	16	66	131	67	24	10	62

Notes: A = Not at all; B = Slightly; C = Moderately; D = Very; E = Extremely; F = Don't know. n.a. = missing values. Total sample: N = 376. Responses are measured on a six-point Likert scale ranging from 1 = Not at all to 5 = Extremely, with additional categories for "Don't know" and missing values (n.a.)

By contrast, municipalities embedded in dense industrial or service-oriented local economies report lower levels of both substantive and procedural criticalities. A dynamic entrepreneurial ecosystem appears to indirectly enhance institutional responsiveness by fostering a culture of project orientation, increasing exposure to external funding mechanisms, and stimulating organisational dynamism. Administrative capacity therefore emerges as partly embedded in the broader socio-economic fabric of the territory.

Procedural criticalities, instead, are positively associated with population growth dynamics. This dimension of friction — affecting approximately four municipalities out of ten — reflects the cumulative administrative pressure generated by multiple simultaneous calls, compliance requirements, and monitoring obligations. In fast-growing municipalities, particularly those experiencing rapid demographic expansion in peri-urban or accessible rural areas, implementation pressures are amplified by increasing service demand and rising administrative workload, often without a proportional expansion in human resources. In such contexts, the NRRP may function as an additional administrative stressor, exacerbating existing organisational bottlenecks.

The two dimensions of criticality therefore respond to distinct territorial logics: socio-economic fragility is associated with interpretative-strategic misalignment, whereas demographic expansion is linked to procedural overload.

Finally, no significant correlation emerges with broad geographical gradients such as the

North-South divide or coastal-inland location. Implementation frictions thus transcend traditional macro-territorial patterns and are more closely associated with local socio-economic structure and governance responsiveness. This reinforces the need for place-based institutional strengthening strategies calibrated to specific territorial ecosystems rather than to aggregate geographical categories.

Policy Recommendations: Addressing Procedural and Strategic Criticalities

The empirical evidence indicates that implementation frictions under the NRRP are differentiated and context-dependent. Effective policy responses therefore require targeted and structurally informed interventions rather than uniform simplification measures.

- Avoid one-size-fits-all simplification strategies, recognising that not all implementation frictions are procedural in nature. Alongside administrative simplification, policy responses should include clearer and more integrated communication of programme objectives, consolidated call calendars, interpretative guidelines issued ex ante, and structured technical briefings for municipalities before the publication of major calls.
- Design differentiated support instruments by clearly distinguishing between procedural bottlenecks and substantive-strategic misalignment. Addressing one without the other risks generating partial solutions. Simplify-

ing procedures alone does not solve interpretative misalignment; improving communication alone does not reduce administrative overload. Procedural support may include centralised help desks, shared technical task forces, standardised project templates, and extended submission timelines for smaller municipalities. Strategic support may involve advisory units for project design, territorial alignment workshops, peer-learning platforms, and ex ante coherence checks between proposed projects and broader development strategies.

- Reinforce administrative capacity in demographically expanding municipalities, where implementation pressures are amplified by increasing service demand and organisational strain. This may include the temporary or permanent allocation of additional technical staff, dedicated project management units, fast-track recruitment procedures, simplified internal reporting workflows, and targeted digital tools to reduce administrative overload.
- Provide structured strategic assistance to socio-economically fragile municipalities, strengthening project design coherence and alignment with programme priorities. Such support may involve central advisory units for project drafting, mentoring schemes with higher-capacity municipalities, territorial strategy workshops, integrated needs assessments, and ex ante guidance to align local proposals with national and European objectives.
- Adopt place-based institutional strengthening measures, tailoring technical assistance, staffing support, and strategic advisory tools to the specific socio-economic structure, demographic pressures, and governance quality of each territory, rather than applying uniform capacity-building schemes across municipalities.

Governance Priorities Emerging from Stakeholder Exchanges and Policy Dialogues

Beyond the academic analysis conducted within this project, a structured process of institutional exchange was carried out through roundtables, policy dialogues, and dedicated stakeholder meetings at national and local level².

These exchanges complemented the empirical findings by incorporating operational perspectives from public administrators, policy-makers, and institutional actors directly involved in NRRP design and implementation.

The lessons presented below synthesise the main strategic orientations that emerged from this dialogue process. They reflect not only analytical evidence, but also shared governance concerns and practical insights discussed throughout the project's engagement activities, with a view to informing future programming cycles and large-scale public investment frameworks.

- Stabilise acquired administrative competences. The skills developed during NRRP implementation — including project management, compliance, and monitoring capabilities — should be institutionalised through permanent technical units, structured career paths, and retention mechanisms, in order to prevent post-programme organisational reset.
- Transition from emergency governance to permanent institutional infrastructure. Temporary coordination mechanisms should evolve into stable governance architectures, with clear role differentiation, binding conflict-resolution procedures, and sustained technical support for municipalities.
- Move from generic competitive calls to needs-based programming. Future investment cycles should be grounded in systematic terri-

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torial needs mapping, differentiated targets, and integrated evaluation frameworks to enhance strategic coherence and reduce territorial asymmetries.

- Pursue intelligent simplification while safeguarding accountability. Reducing administrative overload requires implementation of the “audit once” principle, elimination of redundant reporting requirements, separation of legality checks from performance evaluation, and automation of structured controls.
- Leverage digital infrastructure and artificial intelligence as structural capacity multipliers. Interoperable data systems, integrated programme–project registries, and AI-assisted tools for monitoring, anomaly detection, document processing, and impact evaluation can reduce procedural burden and transform monitoring into a strategic decision-support function.
- Ensure alignment between investment and operational sustainability. Infrastructure funding should be accompanied by mandatory management plans and coordination between capital and current expenditure, preventing the creation of incomplete or financially unsustainable public goods.
- Explicitly manage the trade-offs between speed, quality, and equity. Future governance models should balance rapid execution with transformative impact and territorial inclusion, avoiding mechanisms that may inadvertently reinforce pre-existing administrative disparities.

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All project deliverables and research outputs are available at: <https://nrrpsurvey.econ.univpm.it/>

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