

Declining Free Lunch: State Capacity and Foregone Public Spending

Sarah Fritz¹, Lorenzo Incoronato², and Catherine van der List³

¹Halle Institute for Economic Research

²University of Naples Federico II, CSEF, RFBerlin and CESifo

³University of Essex

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Abstract

This paper documents substantial fiscal waste in the context of one of the world's largest regional development programs – the EU Cohesion Policy. We study Italy, and find that 20% of funding commitments are never paid out and funneled into unfinished or never-started projects. In our setting, this happens for reasons unrelated to fiscal constraints: municipalities appear to simply leave money on the table. Foregone spending is more prevalent in Southern regions, but there is also stark variation across municipalities within regions. We show that such under-utilization of available funds is strongly associated with limited administrative capacity of local governments.

Sarah Fritz: sarah.fritz@iwh-halle.de

Lorenzo Incoronato: lorenzo.incoronato@unina.it

Catherine van der List: catherine.vanderlist@essex.ac.uk

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1 Introduction

Local governments across the world are responsible for provisioning public goods – from schools, to policing, to public housing. There is, however, growing evidence from the United States and Europe that resources available to local governments often remain unspent, resulting in substantial fiscal waste.¹ A salient example is place-based policies where a central authority allocates funds to local governments – usually at little or no fiscal cost for them – to implement specific projects that frequently remain unrealized (Hanson et al., 2025). Despite the clear policy relevance of this issue, its magnitude and possible causes have not been uncovered. Why do local governments fail to utilize the full breadth of resources available to them? On the one hand, they may lack the administrative capacity to implement policies; on the other, such misuse of public funds may arise as a consequence of corruption and agency issues (Bardhan and Mookherjee, 2000; Decarolis et al., 2020; Vannutelli, 2022).

This paper quantifies foregone public spending, defined as public expenditure on approved projects that did not occur for reasons unrelated to fiscal constraints. We develop precise measures of foregone spending in the context of one of the world’s largest regional development programs – the EU Cohesion Policy (henceforth, cohesion policy) – in Italy. Importantly, cohesion policy funds represent a “free lunch” for local governments since they are not part of regular budgets that would present fiscal trade-offs, and there are only very general stipulations on acceptable types of projects. We document the extent of foregone spending and investigate its possible drivers, exploring whether it reflects mechanisms consistent with *passive* waste (low administrative capacity) or *active* waste (local corruption) following Bandiera et al. (2009).

Despite anecdotal evidence about under-utilization of available funds by local governments, research has so far not systematically studied foregone spending. A key limitation is measurement, as unspent earmarked funds rarely appear in data. In this paper, we are able to distinguish payments to each project from initial funding commitments – legally binding allocations made upon project approval. This enables us to measure foregone public spending as the share of commitments never paid, covering roughly 8,000 municipalities (Italy’s most granular administrative unit) over time during two EU funding periods (2007-2013 and 2014-2020). Using administrative data on project completion, we further distinguish

¹See Martini (2020); Lutringer (2022); U.S. Government Accountability Office (2023); Loguercio (2023); Home Builders Federation (HBF) (2025).

whether unspent funds reflect never-launched projects or started but unfinished ones.

We begin by documenting the scale of foregone public spending under cohesion policy in Italy, showing that it is both significant and widespread. Nationally, 20% of funding commitments are never spent, with 5.2% and 13.5% of commitments going to never-started or unfinished projects, respectively (the remainder is cost savings on complete projects). While this issue is more prevalent in Southern Italy, these patterns are not driven solely by differences between regions. We show that even within regions, foregone spending varies greatly across municipalities – with several Northern municipalities exhibiting high degrees of foregone spending.

Motivated by such stark variation in foregone spending across localities, we investigate possible factors associated with it. Following Bandiera et al. (2009), we aim to distinguish between two sources of inefficiency in public spending – *i*) *passive* waste arising from deficiencies in local administrations (e.g., insufficient capacity, low skills); and *ii*) *active* waste, or corruption, yielding direct gains for the public decision maker. Anecdotal reports suggest low administrative capacity (passive waste), which we proxy using the number of employees in municipal offices, to be a key impediment to implementing projects and spending available funds. However, foregone spending from started but incomplete projects may arise as corrupt local officials extract rents from disbursed funds before the project stalls. We proxy active waste using the number of corruption cases involving local public officials (Daniele and Giommoni, 2024).

To investigate the sources of foregone public spending empirically, we regress our measures of foregone spending in Italian municipalities on the proxies of active and passive waste described above. Our specification exploits variation across municipalities within the same province and region, thus accounting for relevant institutional factors such as regional regulations and laws. Additionally, we control for municipality-level covariates including labor market and demographic characteristics, previous municipal spending and the characteristics of local politicians.

While descriptive, our results suggest a consistent pattern. Local administrative capacity is systematically correlated with foregone public spending, pointing to passive waste as an underlying channel. A one standard deviation increase in the number of public employees per inhabitant is associated with a roughly 1 percentage point decrease in the share of funding commitments never paid (7% of the mean), suggesting that local governments with higher administrative capacity are better able to spend the allocated funds. Based on these

estimates, hiring one additional municipal employee would imply fiscal gains equivalent to about two months of their salary. Higher administrative capacity is also associated with a lower share of commitments to never-started projects and, to a lower extent, incomplete projects. In contrast, we find no relationship between local corruption and the share of commitments never paid out, suggesting a minor role of active waste. However, corruption is significantly correlated with commitments to started, but incomplete projects – suggesting that corrupt local actors might extract rents from the initial execution phase (e.g., through procurement contracts). These results are confirmed in several robustness exercises, such as using alternative measures of administrative capacity, controlling for local organized crime presence, and focusing on foregone spending on projects directly managed by municipalities.

The efficient use of public resources is a key issue for economists (Hart et al., 1997), as is identifying possible sources of waste in public spending. This paper contributes to the literature by introducing a novel, relevant measure of waste. Rather than focusing on the prices and quality of public goods and services once they are provided (as done in previous studies), we study the (in)ability of local governments to provide them at all, even in the absence of fiscal constraints. We define clear measures of foregone spending using granular data on funding commitments and payments, and systematically assess their correlation with active and passive sources of waste (Bandiera et al., 2009). Most of the literature emphasizes active waste as a source of inefficiency in public spending, especially in public procurement (Szucs, 2024; Bosio et al., 2022; Coviello et al., 2018; Cingano et al., 2025) and fiscal decentralization (D’Amico, 2021; Rodríguez-Pose and Ezcurra, 2010; Buscemi and Romani, 2024; Enikolopov and Zhuravskaya, 2007; Celli et al., 2025) with reference to the “rules-discretion” tradeoff. Passive waste has instead received less attention in the literature, although Bandiera et al. (2009) identify it as an important driver of inefficient public spending. Other studies have indeed stressed the relevance of administrative capacity in the provision of public services (Rasul and Rogger, 2018; Best et al., 2023). Our results also highlight the role of passive waste, as municipalities with low administrative capacity exhibit higher degrees of foregone public spending.

In fact, local administrative capacity has been identified as an important determinant of EU funds absorption, but the evidence remains limited and based on cross-regional analyses (Bachtler et al., 2024). More broadly, several papers have argued institutional factors mediate the local economic effects of EU development programs, with better impacts in areas with high “absorptive” capacity (Becker et al., 2013; Rodríguez-Pose and Garcilazo, 2015; Carrieri

et al., 2024). There is, in turn, increasing support for policies improving institutions in recipient regions (von Ehrlich, 2024). Our paper computes precise measures of absorption of cohesion policy funds and explores possible sources of waste in their use. We focus explicitly on administrative capacity, and leverage within-region variation to show that less equipped local governments are also those where cohesion policy funds are absorbed the least because projects do not start. We also document that corruption of public officials is associated with higher commitments to unfinished projects, suggesting that active waste may drive low project completion rates as such projects may be used as means of rent extraction (De Angelis et al., 2020).

2 Foregone Public Spending

Foregone public spending – which we define as public expenditure that could have occurred but did not for reasons unrelated to fiscal constraints – is rarely measurable. We leverage the setting of cohesion policy in Italy, using unique administrative data on geolocated projects with information on funding commitments, payments, and project completion status to construct novel measures of foregone spending. These include the share of funding commitments that are never paid, commitments for projects that are never begun, and commitments to incomplete projects. In Section 3, we correlate these measures with local administrative capacity and corruption to explore the possible drivers of foregone spending.

2.1 Institutional Context

Cohesion policy aims to reduce economic disparities across Europe, primarily targeting less-developed regions.² The fiscal transfers are sizable, making cohesion policy EU’s largest budget item. Budget cycles are currently seven years, with the 2014-2020 funding period totaling approximately €530 billion (US\$ 614 billion, see <https://cohesiondata.ec.europa.eu>).

Local governments have strong incentives to absorb cohesion policy funds because they are large transfers from the EU and national governments to increase regional budgets.³ We

²These are NUTS-2 regions with GDP per capita below 75% of the EU average – see Fritz and van der List (2025) for details. In Italy, NUTS-2 regions correspond to the twenty administrative regions, which are responsible for managing cohesion policy funds (except for Trentino-Alto Adige, where the two autonomous provinces administrate the funds separately).

³Cohesion funds are supplemented by national co-financing, which is also unrelated to regional or mu-

verify that municipalities rarely contribute to the financing of cohesion policy projects, as only 0.29% of projects in our sample receive municipal financing. Regions have three years following the conclusion of the funding period to disburse committed funding. Unused funds cannot be repurposed by the regions, as the regional accounts are considered closed by the EU (Council of the European Union, 2006, 2013).⁴

Cohesion policy is very broad in scope, leaving local governments broadly unrestricted by the types of projects they can undertake.⁵ At the beginning of each funding period, regions prepare a Regional Operational Program (*Programma Operativo Regionale*, POR) outlining total cohesion policy funding and its planned split across EU thematic priorities. In the 2014-2020 funding period, thematic objectives were as broad as *Enhancing the competitiveness of SMEs*, *Promoting sustainable transport and improving network infrastructures* or *Investing in education, training and lifelong learning*.⁶ Interested parties – including ministries, municipalities, or private companies – submit project proposals to regional authorities. These proposals may involve, for example, the construction of an electrical substation, the purchase of electric buses, scholarship programs or the renovation of social housing units.

Proposals must include detailed cost estimates. Once a proposal is approved, funds for eligible costs are *committed* to the project.⁷ As projects progress, beneficiaries submit receipts and are reimbursed for eligible expenses. Therefore, funding can be committed to projects which are never started or never completed.

Although strategic planning and funding decisions occur at the regional level, municipalities play a key role in absorbing cohesion policy funds. They may be direct beneficiaries – for example, through infrastructure or urban revitalization projects – and assume an implementing role. In our sample, municipalities are implementers in 20% of projects, representing 34% of committed funds. Beyond direct implementation, municipalities also facilitate project success through stakeholder engagement, ensuring projects align with local needs,

municipal budgets, and in Italy ranges between 20% and 50% of the total allocation depending on regional development levels.

⁴Our data was downloaded three years and six months following the end of the 2014-2020 funding period, after accounts were closed. We also confirm that it is uncommon for projects to be completed in the following funding period: only 0.19% of payments are for finishing prior-period projects (Appendix Table A.1).

⁵Projects are financed through the European Regional Development Fund (ERDF) and the European Social Fund (ESF) depending on the nature of the investment. We pool both funds throughout the paper.

⁶https://ec.europa.eu/regional_policy/policy/how/priorities/2014-2020_en.

⁷Some projects are awarded directly following expressions of interest by potential beneficiaries, while others use public tender procedures analogous to procurement. Appendix Table A.1 reports projects and payments by type of procedure and thematic priority.

and assessing feasibility. They may also be responsible for administrative procedures such as issuing permits for privately executed projects. As such, the capacity and integrity of local governments are likely to influence whether projects are completed successfully or remain unrealized.

2.2 Data

We combine four main data sources. Our primary outcome of interest is municipality-level foregone public spending, measured as the percent of commitments that are never paid out.⁸ We also split this measure into two sub-components: percent of commitments to incomplete (started) projects and percent of commitments to never-started projects. These three variables are computed using data from OpenCoesione, an administrative database of the universe of Italian cohesion policy projects maintained by the Italian government. We match the cohesion policy data to data on bureaucrats from the Annual Account of the State General Accounting Department, and data on corruption episodes from the Italian Investigation System. We complement this municipality-level dataset with information on the financial envelope available to Italian (NUTS-2) regions from regional PORs. We provide details below, and show summary statistics in Appendix Table A.3.

Cohesion Policy Projects – OpenCoesione Database The data covers Italian projects during the 2007-2013 and 2014-2020 funding periods. It reports the location(s) where the project takes place, funding commitments and payments (current Euros), project completion status, and the fund and POR from which the financing originates. The data also includes the tax identifiers and roles (i.e., planning or implementing) of involved actors. We use this information to identify projects where local governments are beneficiaries – a dimension we investigate in robustness tests in Section 3.

We restrict our analysis to projects funded by a single region’s POR, as the data does not include how much funding came from which operational program in the case of multi-program-funded projects.⁹ For analysis, we aggregate data to the region-by-funding-period

⁸This may not fully capture foregone spending if regions anticipate that some projects will not succeed, and deliberately commit more than their planned fund allocation to maximize their chances to absorb all of it. This is, however, not confirmed in the data: only five regions committed more than their allocation, four by less than 5% (Appendix Table A.2).

⁹Multi-source projects represent 7.5% of commitments and 4.7% of payments.

(regional sample) and municipality-by-funding-period (municipal sample) levels. For the latter, we further restrict our regional sample to projects involving one municipality. This excludes projects that target multiple geographic areas, for example, the entire region or several municipalities.¹⁰

We classify projects as complete if they are marked “complete” or “liquidated” in the database. Liquidated projects have had 95-100% of the initial funding commitment paid, but are not marked as complete.¹¹ We then compute our three measures of foregone spending as follows:

$$Share[\text{Commitments never paid out}]_{mt} = 1 - \frac{payments_{mt}^{compl.} + payments_{mt}^{incompl.}}{commitments_{mt}^{all}} \quad (1)$$

$$Share[\text{Commitments, never-started projects}]_{mt} = \frac{commitments_{mt}^{never-started}}{commitments_{mt}^{all}} \quad (2)$$

$$Share[\text{Commitments, incomplete projects}]_{mt} = \frac{commitments_{mt}^{incompl.} - payments_{mt}^{incompl.}}{commitments_{mt}^{all}} \quad (3)$$

for location m and funding period t . We pool EU and national funding when measuring payments and commitments. The suffix (*compl.*, *incompl.*, *never – started*) denotes project completion status (complete, incomplete but started, and never-started). Never-started projects are those with zero payments. The denominator $commitments_{mt}^{all}$ denotes total commitments across all projects regardless of completion status, and is the same for all three measures.¹² The sum of the share of commitments for never-started (2) and unfinished projects (3) does not equal the share of commitments never paid out (1) as Measure 1 also includes cost savings on complete projects.¹³ See Appendix 4.1.1 for formal derivations for this decomposition.

¹⁰Only 5.8% of projects in our regional-level sample target multiple locations.

¹¹Projects exceeding 100% of the initial allocation paid without being marked complete are treated as incomplete as they are likely to be over budget. In our regional sample, just 2.2% of projects (including complete projects) are over budget, and 0.5% of incomplete projects are over budget.

¹² $commitments_{mt}^{all} = commitments_{mt}^{compl.} + commitments_{mt}^{incompl.} + commitments_{mt}^{never-started}$

¹³Among complete projects, 16.2% have savings (2.8% excluding liquidated projects). However, savings are typically small relative to other sources of foregone spending – representing 3.1% of the value of commitments to incomplete projects.

Regional PORs We hand-digitized total EU and national funding allocations to regions from regional PORs, downloaded from OpenCoesione. When multiple versions of the POR were available (due to revisions) we used the earliest one. Although regions can reallocate funds across thematic priorities, the total allocation remains fixed unless approved by the European Commission. We use information on funding allocations to assess how much of their allocated funding regions commit to projects (see Section 2.3).

Administrative Capacity We compute local administrative capacity using data from the Annual Account of the State General Accounting Department, covering all public sector employees from 2001 to 2022. We construct our measure of local administrative capacity solely based on the number of employees in municipal offices – those most likely responsible for implementing projects – excluding public employees in other roles. Administrative capacity in Italy has steadily declined: in 2007, the average municipality employed 6.8 full-time-equivalent (FTE) staff members per 1,000 inhabitants.¹⁴ By 2020, this number had fallen by nearly 20%, to 5.6 FTE per 1,000. We view this variable as a simple proxy for the (in)ability of local governments to implement public projects and conduct policy. While it does not capture potentially relevant (but hardly measurable) dimensions, such as the competence of public employees, it has the advantage of being easily interpretable, transparent, and available for all municipalities. To corroborate our results, we will use an alternative measure – a municipality-level synthetic index of administrative quality devised in Cerqua et al. (2025), which combines information on the number of municipal employees, their turnover, absences, and years of education.

Corruption We use municipality-level corruption data from 2004 to 2014 from the Italian Investigation System. The data covers police investigations authorized by the judiciary into corruption cases such as graft or bribery. One caveat is that the data reports all corruption investigations regardless of their final outcome, thus representing allegations rather than actual crimes. Importantly, these corruption episodes exclusively involve public officials – aligning with our goal of capturing active waste in public administration. See Daniele and Giommoni (2024) for further details.

¹⁴The dataset distinguishes between full- and part-time contracts, but does not specify working hours. We assign a value of 1 to full-time employees and 0.5 to part-time employees.

Additional Data We use municipality-level data sourced from the Italian Statistical Institute (Istat), including demographics and employment composition across sectors and skill groups. We compute total municipal spending using municipal balance sheets sourced from the AIDA PA database. Data on local politicians comes from Italy’s Ministry of the Interior. We consider mayors, vice-mayors, members of the executive committee, and municipal council presidents. We calculate the average years of education of these politicians, as well as the share working in white-collar occupations.¹⁵

2.3 Facts About Foregone Spending

Figure 1 shows aggregate commitment and payment statistics for Italy, pooling all regions and both funding periods. Between 2007 and 2020, Italian regions were allocated cohesion policy funds of about €41 billion from the EU and €27 billion from national sources, totaling €68.34 billion.¹⁶ Of these, about €66 billion (97%) were committed to projects. This suggests that foregone spending under cohesion policy is not an issue of insufficient demand, since funding commitments require a project proposal to be allocated.¹⁷ Out of these commitments, however, only roughly €53 billion (80%) were spent – implying about 20% commitments never paid out. These unpaid commitments, totaling approximately €13.2 billion, are the numerator of our main measure of foregone public spending (Measure 1), and are shown in red at the bottom right of Figure 1. Figure 1 also shows the three potential sources of foregone commitments: those from never-started projects (€3.45 billion, Measure 2), those from started but incomplete projects (€8.9 billion, Measure 3), and a final minor component stemming from cost savings on complete projects.

Foregone spending is more pronounced in Southern Italy, but is not absent in Central and Northern Italy. Southern Italy paid out 73.6% of its funding commitments over this time, while the rest of the country paid out 91.5% with some regions featuring relatively low payout rates. Figure 2 Panel A illustrates this heterogeneity more clearly, showing our

¹⁵Years of education: less than elementary school implies 0 years, elementary school 5 years, middle school 8 years, high school 13 years, bachelor’s degree 18 years, masters’ degree 19 years, doctoral degree 21 years. White collar occupations were classified using ChatGPT.

¹⁶For comparison, Italian total public expenditure in 2014 was about €800 billion.

¹⁷There is also little variation across regions in the share of regional allocation committed, with most regions committing at least 85% of their allocation to specific projects. The minimum is 80.2% in Trentino-Alto Adige (see Appendix Table A.2). This represents a lower bound of the commitment rates of the funds, as we restrict to the set of projects financed by single-region PORs (which cover, however, the majority of payments and commitments – see Footnote 9).

main measure of foregone public spending (share of unpaid commitments, Measure 1) across Italian regions.¹⁸ Panel B provides a more granular view, showing the same measure of foregone spending at the municipal level.¹⁹ Notably, there is considerable variation in foregone spending across municipalities even within regions. This suggests that for the purposes of project implementation, local governments play a key role, motivating the empirical analysis in Section 3.

3 The Role of Active and Passive Waste

The first part of the paper has documented how a large share of cohesion policy funds available to Italian local governments are not spent. We now investigate the possible drivers of foregone spending. As noted previously, the literature has highlighted two key sources of waste in public spending – active and passive – which we capture here using two proxies: local corruption episodes of public officials for active sources of waste, and the number of local public employees for passive sources of waste (both measured per thousand inhabitants).

We begin by exploring possible correlations visually. Figure 3 shows bivariate maps where each municipality is assigned a color based on the correlation between foregone spending – measured as the share of commitments never paid out (Measure 1 in Section 2.2) – and local administrative capacity (Panel A) and corruption (Panel B), respectively. These simple maps reveal interesting facts. Municipalities feature large variation – even within regions – in both administrative capacity and corruption. For administrative capacity (Panel A), we notice a prevalence of areas where high capacity is associated with low foregone spending (the light blue cells), possibly in line with passive waste mechanisms. As to corruption (Panel B), there are less clearly detectable patterns, which might suggest a minor role of active waste.²⁰

This visual representation of the data, however, does not consider differences between municipalities that may be correlated with both foregone spending and its possible sources. To account for relevant municipality characteristics, we run regressions that relate foregone

¹⁸Exact values are reported in Appendix Table A.2.

¹⁹Appendix Figure A.1 Panels A-B and C-D show the decomposed components (Measures 2 and 3) at the regional and municipal level, respectively. Appendix Figure A.2 shows instead a related phenomenon: the percentage of *payments* to incomplete projects. We do not consider this a precise measure of foregone spending because we cannot determine with certainty whether such payments are “beneficial” (e.g., a scholarship program that pays out 80% of its initial commitments versus a half-finished bridge).

²⁰Appendix Figure A.3 shows the corresponding bivariate map for corruption and administrative capacity, highlighting variation in both and showing that they are not strongly correlated.

public spending to local corruption and administrative capacity, aiming to assess whether they are associated with foregone spending and, importantly, which of the two matters the most. Our specification is as follows:

$$y_{mt} = \gamma_1 \cdot AdminCapacity_{mt} + \gamma_2 \cdot Corruption_{mt} + X'_{mt} \cdot \beta + \alpha_{p(m)} + \delta_t + v_{mt}, \quad (4)$$

where the outcome variable y_{mt} denotes each of the three measures described in Section 2.2 – percent of commitments never paid out (Measure 1), percent of commitments to never-started projects (Measure 2) and percent of commitments to incomplete (started) projects (Measure 3) – for municipality m and in funding period t (recall we focus on the two funding periods 2007-2013 and 2014-2020). The coefficients of interest are γ_1 and γ_2 , attached to measures of administrative capacity (number of public employees per 1,000 inhabitants) and corruption (number of corruption cases per 1,000 inhabitants) in municipality m and funding period t . X'_{mt} is a matrix of municipality-level controls. These include basic geographic characteristics (dummies for provincial capital status and coastal location), labor market and demographic characteristics (population density, young age dependency ratio, employment share of high- and medium-skill jobs – low-skill jobs omitted, employment share of industry and services – agriculture omitted), municipal spending (expenses per capita) and characteristics of local politicians (average years of education and share employed in white-collar occupations).²¹ Controlling for the quality of local politicians is relevant to the extent that more skilled politicians are, in principle, more able to attract external funds. Last, $\alpha_{p(m)}$ and δ_t are province and funding-period fixed effects. Standard errors are clustered at the province level.

These regressions control for many possible drivers of foregone public spending at the local level, aiming to isolate the contributions of passive and active sources of waste. Before moving to results, however, we caveat that our empirical set-up does not allow causal identification of the γ_1 and γ_2 parameters. Because municipalities can use cohesion funds over the entire

²¹The young-age dependency ratio is measured as population aged below 15 as a share of population aged 15 to 64. Employment skill composition is computed using Isco08 occupation codes, with codes 1, 2 and 3 denoting high-skill jobs, codes 6 and 7 denoting medium-skill jobs and code 8 denoting low-skill jobs. We obtain funding-period-specific (suffix t) measures of our independent variables as averages (administrative capacity, politicians' characteristics) and totals (corruption episodes) computed in the four years before the start of each funding period. For labor market and demographic controls, obtained from decennial census data, we use the 2001 level for the 2007-2013 funding period and the 2011 level for the 2014-2020 funding period. All other controls are time-invariant. Municipal spending is measured as of year 2000.

funding cycle (Section 2.1), foregone spending can only be measured at two points in time at most – corresponding to each the two EU funding cycles – rather than on an annual basis. The limited longitudinal dimension of our dataset prevents us from using within-municipality variation, or leveraging possible exogenous shocks in our explanatory variables. Hence, we refrain from giving a causal interpretation to our estimates of γ_1 and γ_2 , and see our findings as largely descriptive.

Regression results Table 1 shows the main results, relating our measures of foregone spending to the two key explanatory variables capturing passive and active waste. In odd-numbered columns both regressors are measured as a share of local population; while they are standardized in even-numbered columns to allow direct comparison of coefficient magnitudes.²²

Columns (1)-(2) report on our main measure of foregone spending – the share of commitments never paid out (Measure 1). Higher administrative capacity is associated with significantly lower foregone spending, with a one standard deviation increase in the number of public employees per 1,000 inhabitants associated with a 1.17 percentage points reduction in the share of unpaid commitments – an effect size roughly 7% of the mean. A simple quantification exercise based on these estimates suggests that hiring one additional municipal employee would imply a reduction in foregone spending equivalent to about two months of their salary.²³ As to local corruption, we instead estimate a small and non-significant coefficient. This suggests that the under-utilization of (already committed) cohesion policy funds is most likely a result of low administrative capacity rather than diversion of funds by corrupt public officials.

In Columns (3)-(6), we break down the effect using information on project completion status, distinguishing between commitments to never-started projects (Measure 2, Columns 3-4) and commitments to incomplete (started) projects (Measure 3, Columns 5-6).²⁴

Administrative capacity is a significant predictor of foregone spending across both components and especially for commitments to projects that are never started, which decline by

²²Appendix Table A.5 shows regression coefficients for all the included covariates.

²³We caveat that these calculations, illustrated in Appendix 4.1.2, are based on descriptive rather than causal coefficient estimates, and should thus be interpreted with caution.

²⁴The coefficients in Columns (3)-(6) do not precisely add up to those in Columns (1)-(2) since, as explained in Section 2.2 and showed in Appendix 4.1.1, the shares of commitments to incomplete and never-started projects do not exactly add up to the share of commitments never paid out.

1 percentage point in response to a one standard deviation increase in administrative capacity. As to corruption, we find no association with commitments to never started projects, for which no EU funds were disbursed. However, when looking at commitments to incomplete (started) projects, we now estimate a positive coefficient for local corruption, quantitatively very similar to that for administrative capacity – a standardized effect of about 0.3 percentage points – and statistically significant (Column 6).²⁵ This suggests that local corruption could induce foregone spending to the extent that it channels funds to projects that are not completed but nevertheless allow local actors to extract rents (e.g., via procurement contracts linked to project execution).²⁶

Robustness We confirm these results in several robustness tests, presented in Table 2 (which reports coefficients for standardized regressors). First, we cluster standard errors at the region (NUTS-2) rather than province (NUTS-3) level (Panel A). Doing so slightly lowers the precision of our estimates but does not alter the baseline findings of a negative association between administrative capacity and foregone spending. Panel B replaces the number of municipal employees with a synthetic index built in Cerqua et al. (2025) capturing bureaucratic quality. Reassuringly, using an alternative measure of administrative capacity does not fundamentally change our results, although coefficients are less precisely estimated. In Panel C, we show that results are unchanged when replacing corruption per capita with a corruption dummy – a binary indicator taking value one in municipalities with at least one corruption episode and zero otherwise.²⁷ Last, Panel D additionally controls for municipality-level mafia presence sourced from Dugato et al. (2020).²⁸ Accounting for local organized crime does not affect our baseline estimates much. Interestingly, higher mafia presence is positively associated with the share of commitments to incomplete (started) projects, but negatively

²⁵Appendix 4.1.3 discusses why the coefficient on corruption is insignificant for commitments never paid out in Columns (1)-(2), while being significant for commitments to incomplete projects in Columns (5)-(6), despite the latter account for a large fraction of the former.

²⁶Relating the share of *payments* (rather than commitments) to incomplete projects to local corruption, we also find a positive and statistically significant effect, suggesting that rent extraction requires money to flow (Appendix Table A.6).

²⁷This is done to address a concern arising when measuring local corruption using the number of investigations – as we do in the baseline specification – since a single corruption investigation may be counted multiple times if it involves violations of multiple Penal Code articles (Daniele and Giommoni, 2024).

²⁸The measure constructed in Dugato et al. (2020) is a municipal-level index of five indicators: mentions of mafia presence from the government task force’s annual reports, criminal offenses for mafia associations, homicides and attempted homicides, dissolutions of city councils due to mafia infiltration, and assets confiscated from organized crime. The index uses data between 2000 and 2015 for most sub-indicators.

associated with the share of never-started projects – suggesting local organized crime may have incentives that projects are initiated in order to benefit from their execution. Taken together, these robustness tests support our key conclusion that administrative capacity is a relevant predictor of foregone public spending.

Local actors Finally, Table 2 Panel E shows coefficient estimates when the three measures of foregone spending are computed using exclusively data for projects implemented by local governments (provinces or municipalities) as opposed to any other type of actor.²⁹ The role of local administrative capacity and corruption in driving foregone spending should be stronger for projects that uniquely rely on local competences and infrastructure for their realization. Indeed, we estimate larger coefficients on both administrative capacity and corruption in this case, with one exception – as administrative capacity does not seem to be associated much with commitments to incomplete projects (Panel E Column 3).

4 Conclusion

Government decentralization is a common trait of modern economies and has accelerated in recent decades. Several economic models suggest that decentralization may be efficient as it incentivizes competition between areas, or moves decision making closer to local communities (Tiebout, 1956; Oates, 1972, 1999). There are, however, concerns about possible drawbacks, including anecdotal evidence that local governments under-utilize available resources. Using novel data on funding commitments, payments, and completion status for EU cohesion policy projects in Italy, we document striking evidence of foregone public spending by local governments, as municipalities across Italy are unable to start or finish projects for which funds have already been allocated. While the percentage of funding commitments never paid out is approximately 20% nationally, this masks stark variation across regions and municipalities. In many municipalities, almost all of the allocated funds go to projects which are ultimately never begun or never finished.

Beyond documenting patterns in foregone public spending across Italy, we also investigate descriptively its possible drivers, distinguishing between *passive* (low administrative

²⁹Specifically, this measure conditions on whether a municipal or provincial government is listed in an implementation role for the project. See the notes to Table 2 for details. Appendix Table A.4 shows descriptive statistics for these local-actor projects.

capacity) and *active* (corruption) sources. Results suggest that administrative capacity in Italian municipalities is a more important predictor of foregone public spending than corruption of local officials – with simple calculations showing that hiring one additional municipal employee might lead to fiscal gains of about two months of their salary. Local corruption is, instead, a significant predictor only when examining started but incomplete projects.

Overall, these findings should be of interest to academics as well as policymakers – and not limited to the context of EU cohesion policy. We have developed novel measures of foregone spending, quantifying a problem that has, to our knowledge, never been previously measured. Our results empirically demonstrate a potential drawback of government decentralization: that some local governments may not have the means necessary to implement public works. Understanding whether foregone spending arises because funds are diverted by corrupt public bodies or because local administrations lack capacity to manage such funds also has relevant implications for policy design. For instance, enhanced monitoring and regulations would improve utilization of public funds if active waste is the key source of inefficiency; instead, if foregone spending is due – as our results suggest – mainly to low administrative capacity, more regulation would increase the burden on local governments and possibly even exacerbate foregone spending (Bosio et al., 2022). Future research employing quasi-experimental designs and natural experiments leveraging variation in administrative capacity and/or corruption will establish these channels causally.

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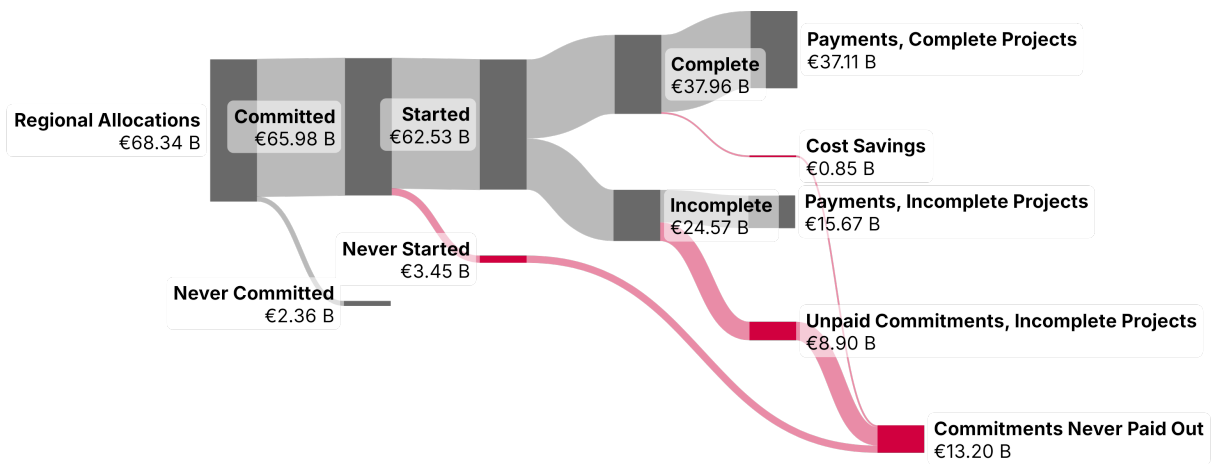
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Figures

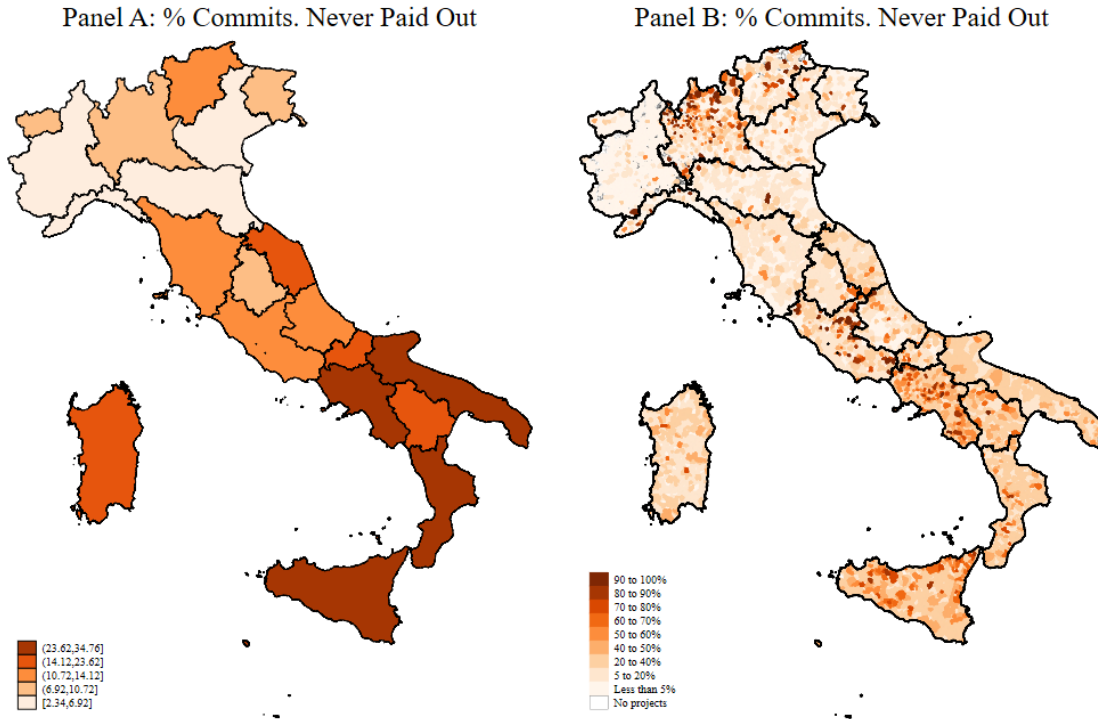
Figure 1: Foregone Spending in EU Cohesion Policy in Italy

Commitments and Payments, 2007-2020



Notes: Regional allocations are funds allocated via PORs for the ERDF and ESF, pooled across both funding periods (2007-2013 and 2014-2020). Commitments and payments are also pooled across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects described in Section 2.2. Never-started projects are those with zero payments. The numerators of Measure 2 and Measure 3 are the red “Never Started” and “Unpaid Commitments, Incomplete Projects” lines, respectively. The numerator of Measure 1 is the red “Commitments Never Paid Out” line.

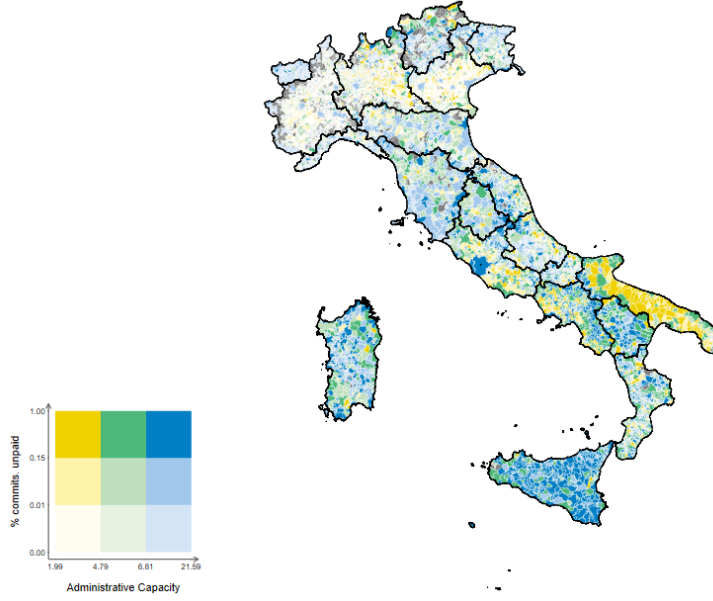
Figure 2: Foregone Public Spending Across Regions and Municipalities



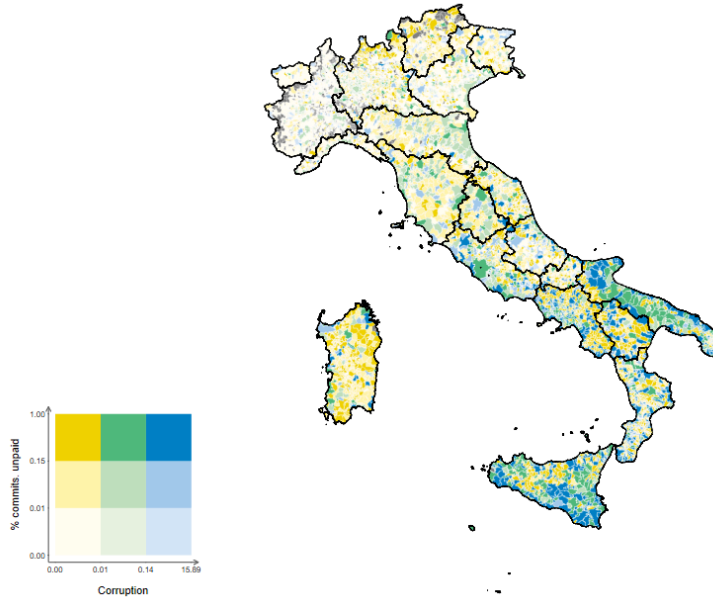
Notes: Foregone public spending measured as percent of commitments never paid out, as defined in Section 2.2 (Measure 1). Commitments are pooled across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects described in Section 2.2. Never-started projects are those with zero payments. Panel A shows a breakdown across regions using the regional sample of projects. Panel B shows a breakdown across municipalities using the municipal sample of projects. See Section 2.2 for a description of these samples.

Figure 3: Explaining Foregone Spending: Bivariate Maps

Panel A: % Commitments Never Paid Out and Administrative Capacity



Panel B: % Commitments Never Paid Out and Corruption



Notes: Percentage of commitments never paid out is defined in Section 2.2 (Measure 1), pooled across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects and multi-location projects described in Section 2.2. Administrative capacity and corruption are the averages over the two funding periods of our regressors of interest – total municipal employees (administrative capacity) and total number of per-capita charges (corruption) per 1,000 inhabitants, computed in the four years before the start of each funding period. Municipalities in gray had no projects.

Tables

Table 1: Explaining Foregone Spending: Passive and Active Waste

	(1)	(2)	(3)	(4)	(5)	(6)
	% Commitments Never Paid Out	% Commitments Never Paid Out	% Commitments to Never Started Projects	% Commitments to Never Started Projects	% Commitments to Incomplete Projects	% Commitments to Incomplete Projects
Administrative capacity	-0.34** (0.14)	-1.17** (0.47)	-0.31** (0.12)	-1.04** (0.41)	-0.09* (0.05)	-0.31* (0.18)
Corruption	2.06 (3.83)	0.17 (0.32)	-0.97 (3.30)	-0.08 (0.27)	3.18** (1.48)	0.26** (0.12)
Standardized regressors	No	Yes	No	Yes	No	Yes
Observations	11,804		11,804		11,804	
R ²	0.39		0.24		0.26	
Mean	15.55		7.92		5.99	
Standard deviation	23.84		20.74		12.41	

Notes: Estimation output of Equation 4. The outcome variables are the share of commitments never paid out (Columns (1)-(2)), the share of commitments to never started projects (Columns (3)-(4)) and the share of commitments to incomplete (started) projects (Columns (5)-(6)). The main regressors of interest are administrative capacity, measured as the number of public employees in each municipality per 1000 inhabitants (winsorized at 1% and 99%), and corruption per capita, measured as the number corruption charges in the municipality per 1000 inhabitants (winsorized at 5% and 95%). In Columns (2), (4) and (6) both regressors are standardized. The specification additionally controls for funding period fixed effect, province fixed effects and the following municipality-level controls: dummies for provincial capital status and coastal location; population density, young age dependency ratio, share of employment in high-skill and medium-skill occupations, share of employment in manufacturing and services; municipality expenses per capita, characteristics of local politicians (average number of years of education and share of those employed in white-collar occupations). Standard errors clustered by province are in parentheses. Appendix Table A.5 shows the full regression estimates. * p<0.10, ** p<0.05, *** p<0.01.

Table 2: Robustness Tests

	(1) % Commitments Never Paid Out	(2) % Commitments to Never Started Projects	(3) % Commitments to Incomplete Projects
<i>A) Region-Level Std. Error Clustering</i>			
Administrative capacity	-1.17* (0.61)	-1.04* (0.56)	-0.31 (0.18)
Corruption	0.17 (0.57)	-0.08 (0.48)	0.26* (0.15)
<i>B) Alternative Capacity Indicator (MAQI)</i>			
Administrative capacity	-0.54* (0.32)	-0.42 (0.31)	-0.21 (0.17)
Corruption	0.19 (0.32)	-0.06 (0.28)	0.27** (0.12)
<i>C) Corruption Dummy</i>			
Administrative capacity	-1.18** (0.48)	-1.05** (0.41)	-0.32* (0.18)
Corruption	-0.03 (0.95)	-1.12 (0.80)	1.05*** (0.34)
<i>D) Control for Mafia Presence</i>			
Administrative capacity	-1.18** (0.48)	-1.06** (0.41)	-0.31* (0.18)
Corruption	0.20 (0.31)	-0.03 (0.27)	0.25* (0.12)
Mafia presence	-0.60 (0.42)	-0.81** (0.34)	0.31* (0.18)
Observations	11,804	11,804	11,804
R ²	0.39	0.24	0.26
Mean	15.55	7.92	5.99
Standard deviation	23.84	20.74	12.41
<i>E) Local Actors Projects</i>			
Administrative capacity	-1.42** (0.59)	-1.90*** (0.59)	0.21 (0.22)
Corruption	0.57 (0.40)	0.29 (0.37)	0.40** (0.18)
Observations	8,223	8,223	8,223
R ²	0.38	0.31	0.18
Mean	19.95	10.04	7.10
Standard deviation	28.97	26.75	14.36

Notes: Estimation output of Equation 4 for the three main outcome variables (see Table 1). The main regressors of interest are administrative capacity, measured as the number of public employees in each municipality per 1000 inhabitants (winsorized at 1% and 99%), and corruption per capita, measured as the number corruption charges in the municipality per 1000 inhabitants (winsorized at 5% and 95%). Both regressors are standardized. The specification additionally controls for funding period fixed effect, province fixed effects and the following municipality-level controls: dummies for provincial capital status and coastal location; population density, young age dependency ratio, share of employment in high-skill and medium-skill occupations, share of employment in manufacturing and services; municipality expenses per capita, characteristics of local politicians (average number of years of education and share of those employed in white-collar occupations). Panel A) presents standard errors clustered by region in parentheses, rather than by province as in all other specifications. Panel B) uses the Municipality Administrative Quality Index (Pillar I: Bureaucracy) (Cerqua et al., 2025), also standardized, as measure of administrative capacity. Panel C) replaces corruption per capita with a binary indicator taking value of one for municipalities with at least one corruption episode and zero otherwise. Panel D) additionally controls for the Mafia Presence Index presented in Dugato et al. (2020) (see Footnote 28). Panel E) shows results when all outcome variables are computed only considering projects implemented by local actors. Actors we consider to be in this category are: schools, provinces, municipalities, special companies pursuant to consolidated law 267/2000, metropolitan cities, mountain or island communities, chambers of commerce, a union of municipalities, and public welfare/charity institutions. * p<0.10, ** p<0.05, *** p<0.01.

Declining Free Lunch: State Capacity and Foregone Public Spending (Fritz, Incoronato and van der List)

Supplemental Appendix

4.1 Technical Appendix

4.1.1 Decomposition

Our main measure of foregone spending given in Measure 1 is the share of commitments never paid out for location m and funding period t :

$$Share[\text{Commitments never paid out}]_{mt} = 1 - \frac{payments_{mt}^{compl.} + payments_{mt}^{incompl.}}{commitments_{mt}^{all}} \quad (1)$$

This measure can be decomposed into three components. First, the share of commitments to never-started projects, Measure 2:

$$Share[\text{Commitments, never-started projects}]_{mt} = \frac{commitments_{mt}^{never-started}}{commitments_{mt}^{all}} \quad (2)$$

Second, the share of commitments to incomplete (started) projects that were never paid out, Measure 3:

$$Share[\text{Commitments, incomplete projects}]_{mt} = \frac{commitments_{mt}^{incompl.} - payments_{mt}^{incompl.}}{commitments_{mt}^{all}} \quad (3)$$

The remainder and third component is cost savings on completed projects, which can be seen by summing Measures 2 and 3:

$$\begin{aligned} & \frac{commitments_{mt}^{never-started} + commitments_{mt}^{incompl.} - payments_{mt}^{incompl.}}{commitments_{mt}^{all}} \\ &= \frac{(commitments_{mt}^{all} - commitments_{mt}^{completed}) - payments_{mt}^{incompl.}}{commitments_{mt}^{all}} \\ &= 1 - \frac{commitments_{mt}^{completed} + payments_{mt}^{incompl.}}{commitments_{mt}^{all}} \end{aligned}$$

$$\begin{aligned}
&= 1 - \frac{\text{payments}_{mt}^{\text{completed}} + \text{savings}_{mt}^{\text{completed}} + \text{payments}_{mt}^{\text{incompl.}}}{\text{commitments}_{mt}^{\text{all}}} \\
&= 1 - \underbrace{\frac{\text{payments}_{mt}^{\text{completed}} + \text{payments}_{mt}^{\text{incompl.}}}{\text{commitments}_{mt}^{\text{all}}}}_{\text{Measure 1}} - \underbrace{\frac{\text{savings}_{mt}^{\text{completed}}}{\text{commitments}_{mt}^{\text{all}}}}_{\text{Remainder}}
\end{aligned}$$

Therefore, the share of commitments to never-started projects and of commitments to started but incomplete projects do not exactly add up to the share of commitments never paid out if there are, as we document, savings on completed projects.

4.1.2 Quantification Exercise

Here, we describe back-of-the-envelope calculations aiming to better assess the magnitudes of our coefficient estimates. Our key result (Table 1) is that higher local administrative capacity in the form of one additional municipal employee per 1,000 inhabitants is associated with a lower share of commitments unpaid. We now ask what this implies in Euro amounts. To do so, we replicate our main design and estimate the baseline specification of Equation 4, but now use as outcome the (log) Euro amount of commitments never paid out (that is, the sum of commitments to never-started projects and commitments to incomplete projects, net of payments to incomplete projects). We estimate a coefficient of -0.028 (standard error 0.012), implying that one additional municipal employee per 1,000 inhabitants is associated with a 2.80% decline in unpaid commitments. Considering a mean population of 8,900 inhabitants and mean commitments unpaid of €1,233,957 in the estimation sample, this estimate implies that one additional municipal employee is associated with a €3,882 reduction in foregone spending – roughly two months of pay for the average public employee in Italy (Corte dei Conti, 2020).

As noted in the main text, this calculation is illustrative and should be interpreted with caution, as it is based on largely descriptive evidence. It is, however, useful to gain a better understanding of the magnitudes of our estimated effects, possibly providing insights to policymakers seeking to balance the costs of increasing administrative capacity with the benefits of higher absorption of public funds.

4.1.3 Statistical significance

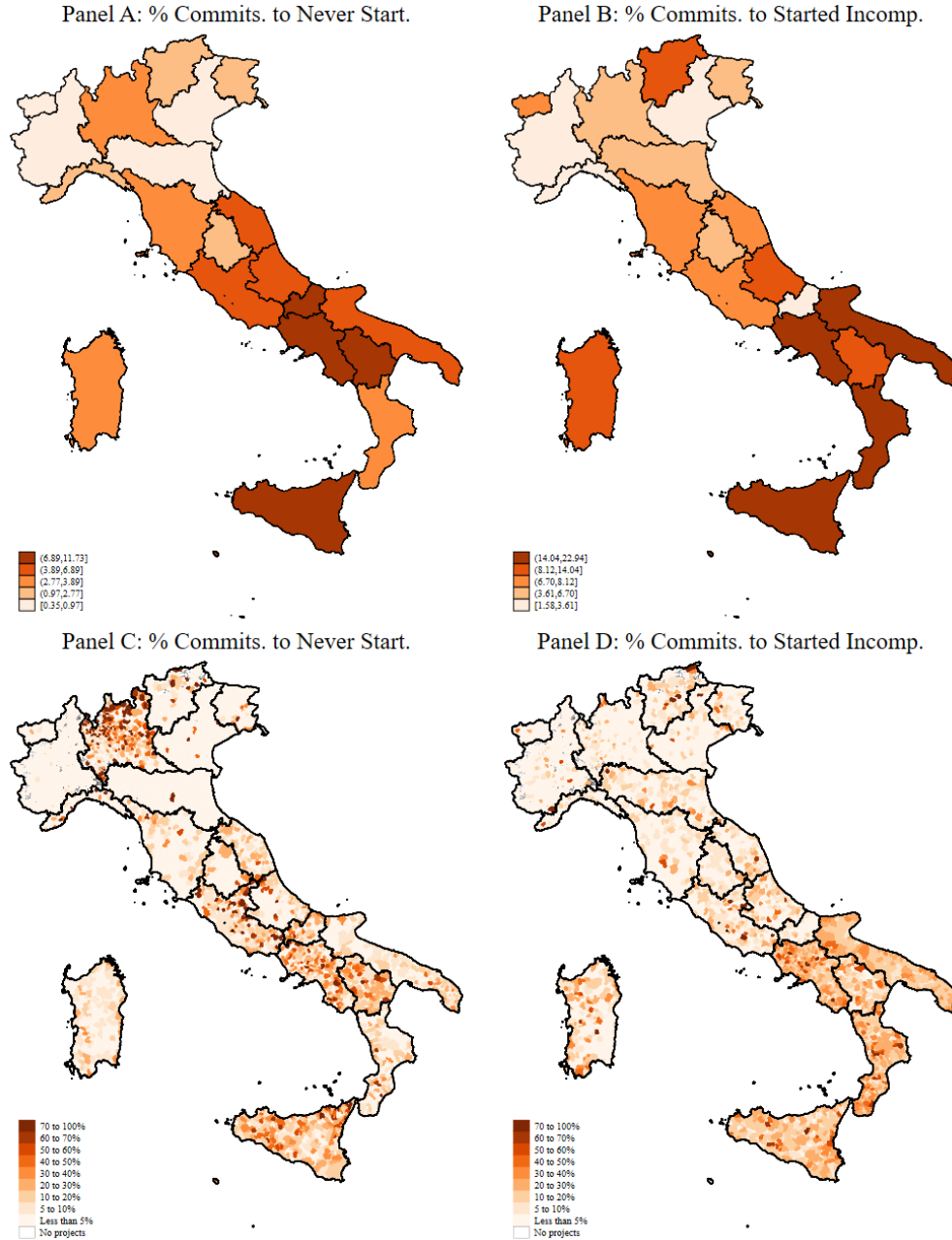
In a decomposition such as ours where $\hat{\beta} = \hat{\beta}_{\text{never-started}} + \hat{\beta}_{\text{incompl.}}$, and where $\hat{\beta}_{\text{never-started}}$ is the opposite sign of $\hat{\beta}_{\text{incomplete}}$ (as is the case for local corruption), it is more difficult to find a statistically significant coefficient $\hat{\beta}$. In other words, it is likely that $|t| < |t_{\text{incompl.}}|$. To understand why, assume that the inequality holds:

$$\begin{aligned}
|t| &< |t_{incompl.}| \\
|t| &= \frac{|\hat{\beta}|}{\sqrt{Var(\hat{\beta})}} < \frac{|\hat{\beta}_{incompl.}|}{\sqrt{Var(\hat{\beta}_{incompl.})}} = |t_{incompl.}| \\
|t| &= \frac{|\hat{\beta}_{never-started} + \hat{\beta}_{incompl.}|}{\sqrt{Var(\hat{\beta}_{never-started}) + Var(\hat{\beta}_{incompl.}) + 2Cov(\beta_{never-started}, \beta_{incompl.})}} < \frac{|\hat{\beta}_{incompl.}|}{\sqrt{Var(\hat{\beta}_{incompl.})}} = |t_{incompl.}|
\end{aligned}$$

The inequality always strictly holds for the numerator, as $|\hat{\beta}| < |\hat{\beta}_{incompl.}|$ given the opposite signs. In the denominator, a scenario where $Var(\hat{\beta}) < Var(\hat{\beta}_{incompl.})$ would work against the inequality to hold. Such a scenario requires that *i*) $Cov(\beta_{never-started}, \beta_{incompl.}) < 0$ and that *ii*) $|Var(\hat{\beta}_{never-started})| < |2Cov(\beta_{never-started}, \beta_{incompl.})|$. Even if that were the case, the effect of the numerator appears to dominate in our case, as we find local corruption to be a significant predictor of commitments to incomplete started projects, but not for the aggregate measure of commitments never paid out.

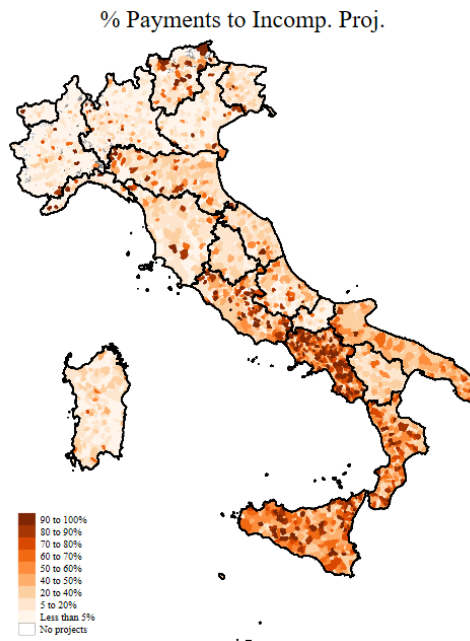
4.2 Additional Figures

Appendix Figure A.1: Foregone Public Spending – Components



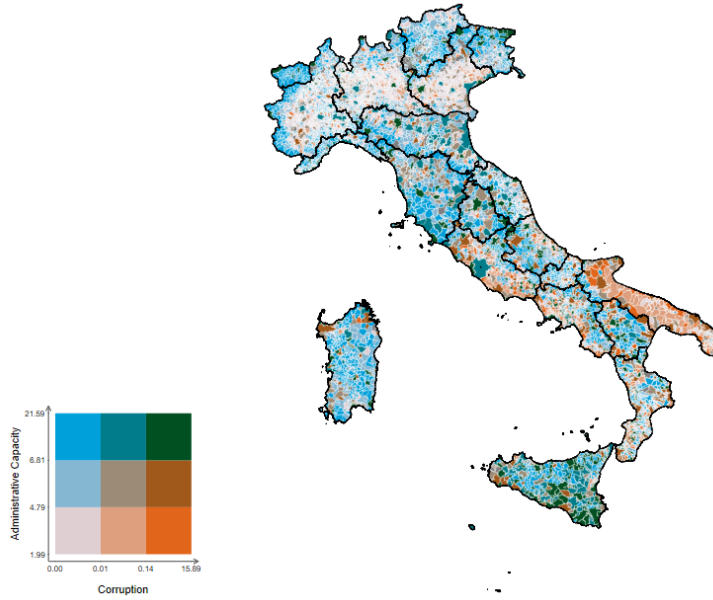
Notes: Foregone public spending measures are as defined in Section 2.2 (Measure 2 for Panels A and C, Measure 3 for Panels B and D). Commitments are pooled across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects and multi-location projects described in Section 2.2. Never-started projects are those with zero payments. Panels A and B show a breakdown across regions using the regional sample of projects. Panels C and D show a breakdown across municipalities using the municipal sample of projects. See Section 2.2 for a description of these samples.

Appendix Figure A.2: Share of Payments to Incomplete Projects



Notes: The figure shows the percentage of all payments that are made to incomplete projects, pooled across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects and multi-location projects described in Section 2.2.

Appendix Figure A.3: Corruption and Administrative Capacity



Notes: Administrative capacity and corruption are the averages over the two funding periods of our regressors of interest – total municipal employees (administrative capacity) and total number of per-capita charges (corruption) per 1,000 inhabitants, computed in the four years before the start of each funding period.

4.3 Additional Tables

Appendix Table A.1: Project Summary Statistics - All Projects

	Percent of Projects	Percent of Payments
Panel A: Funding Procedure		
Circular	0.77	3.67
Direct Identification	1.06	16.33
Expression of Interest	0.15	0.44
Negotiated Procedure	0.81	8.16
Other	1.67	10.00
Previous Period Completion	0.02	0.19
Public Notice	37.01	27.03
Public Tender	57.01	33.55
Unknown	1.51	0.62
Panel B: Project Theme		
Research & Innovation	1.79	9.76
Digital Networks & Services	0.92	2.16
Business Competitiveness	7.05	12.72
Energy	0.68	4.25
Environment	0.56	9.65
Culture & Tourism	0.54	6.03
Transportation	0.13	9.81
Employment & Work	62.04	16.56
Social Inclusion & Health	4.93	12.02
Education & Training	20.84	14.01
Administrative Capacity	0.52	3.04

Notes: Calculated using projects across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects and multi-location projects described in Section 2.2. Panel A shows a breakdown by project funding procedure. Panel B shows a breakdown by project thematic priority. Both breakdowns are provided both as a percent of the total number of projects (left) and of total payments (right).

Appendix Table A.2: Foregone Public Spending – Regional Level

	(1)	(2)	(3)	(4)
	% Allocation Committed	% Commitments Never Paid	% Commitments Never Started	% Commitments Started Incomplete
Region				
Abruzzo	87.34	12.91	3.89	8.39
Basilicata	88.56	23.03	11.73	11.13
Calabria	104.63	26.10	3.89	20.07
Campania	102.58	27.08	8.31	16.94
Emilia-Romagna	105.46	5.96	0.47	4.16
Friuli Venezia Giulia	95.05	8.51	2.70	5.26
Lazio	97.84	13.47	4.94	7.48
Liguria	89.87	4.95	1.34	3.05
Lombardia	91.47	7.42	3.58	3.82
Marche	88.61	15.19	5.48	7.60
Molise	88.88	15.22	10.69	3.26
Piemonte	82.07	2.34	0.35	1.58
Puglia	113.49	24.22	4.91	19.15
Sardegna	89.57	14.78	2.85	9.19
Sicilia	84.80	34.76	9.59	22.94
Toscana	103.42	11.69	3.32	7.75
Trentino-Alto Adige	80.17	13.06	2.00	9.21
Umbria	94.84	8.85	1.66	5.92
Valle d'Aosta	89.79	9.76	0.50	7.86
Veneto	86.07	6.43	0.61	3.40
Total	93.23	14.29	4.14	8.91

Notes: The regional allocation is calculated as the total funding (including national co-financing) provided in the regions' PORs for two funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF). Foregone public spending measures are as defined in Section 2.2 (Measure 1, 2, and 3 for Columns (2), (3) and (4), respectively). Commitments are pooled across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects described in Section 2.2. Never-started projects are those with zero payments.

Appendix Table A.3: Municipal Summary Statistics

	Mean	sd	p50	IQR
Panel A: Projects				
Number of ERDF/ESF projects	99.21	954.50	9.00	23.00
Avg payments/project (Euros)	67406.13	136640.64	28063.04	61181.09
Number of implementing actors/project	1.80	0.82	1.95	0.60
Total Municipal Financial Commitments (Euros)	4340.11	44354.94	0.00	0.00
Panel B: Demographics/Labor				
Population density (km2)	291.22	631.39	106.71	219.96
Young age dependency ratio	20.51	4.17	20.48	4.93
% employment high-skill occs	28.49	7.05	28.16	9.00
% employment medium-skill occs	28.32	7.29	28.64	9.82
% employment manufacturing	34.09	12.07	33.33	17.81
% employment services	56.24	11.40	56.14	15.87
Panel C: Geography				
Provincial capital dummy	0.01	0.12	0.00	0.00
Coastal location dummy	0.08	0.27	0.00	0.00
Panel D: Other				
Municipal expenses (2000, per cap)	1094.76	1167.87	861.75	536.68
Average yrs. educ, politicians	13.55	2.29	13.71	3.14
Sh. politicians white collar occs	0.43	0.28	0.40	0.38
Corruption charges per capita	0.06	0.41	0.00	0.00
Public employees/1000 persons	6.54	3.40	5.65	3.39
Panel E: Foregone Spending				
% Commits. Never Paid Out	15.21	23.57	4.06	20.58
% Payments to Incomp. Proj.	18.43	30.19	0.00	25.51
% Commits. to Never Start.	7.66	20.42	0.00	1.86
% Commits. to Started Incomp.	5.83	12.29	0.00	5.98

Notes: Averaged data from the municipal-level sample across the two funding periods (2007-2013 and 2014-2020). For labor market and demographic characteristics, these are the 2001 and 2011 levels from the decennial census data. Politician characteristics, administrative capacity, and corruption charges, are computed as averages (politician characteristics and administrative capacity) and totals (corruption charges) in the four years before the start of each funding period.

Appendix Table A.4: Project Summary Statistics - Local Actor Projects

	Percent of Projects	Percent of Payments
Panel A: Funding Procedure		
Circular	1.01	5.52
Direct Identification	1.70	20.05
Expression of Interest	0.58	0.79
Negotiated Procedure	1.63	12.09
Other	3.06	12.85
Previous Period Completion	0.03	0.20
Public Notice	24.21	20.66
Public Tender	63.90	27.19
Unknown	3.89	0.66
Panel B: Project Theme		
Research & Innovation	0.02	0.31
Digital Networks & Services	2.18	2.27
Business Competitiveness	0.66	2.09
Energy	2.00	7.32
Environment	2.01	17.74
Culture & Tourism	1.67	11.68
Transportation	0.53	17.79
Employment & Work	53.52	7.01
Social Inclusion & Health	7.50	15.49
Education & Training	29.20	17.14
Administrative Capacity	0.71	1.17

Notes: Calculated using projects across both funding periods (2007-2013 and 2014-2020) and funds (ERDF and ESF) after making the sample restrictions with respect to multi-source projects and multi-location projects described in Section 2.2. The sample includes only projects implemented by local actors. Actors we consider to be in this category are: schools, provinces, municipalities, special companies pursuant to consolidated law 267/2000, metropolitan cities, mountain or island communities, chambers of commerce, a union of municipalities, and public welfare/charity institutions. Panel A shows a breakdown by project funding procedure. Panel B shows a breakdown by project thematic priority. Both breakdowns are provided both as a percent of the total number of projects (left) and of total payments (right).

Appendix Table A.5: Full Regression Table

	(1) % Commitments Never Paid Out	(2) % Commitments to Never Started Projects	(3) % Commitments to Incomplete Projects
Administrative capacity	-1.17** (0.47)	-1.04** (0.41)	-0.31* (0.18)
Corruption	0.17 (0.32)	-0.08 (0.27)	0.26** (0.12)
Provincial capital dummy	1.64* (0.87)	-0.01 (0.69)	1.95*** (0.60)
Coastal location dummy	1.89*** (0.70)	0.62 (0.79)	1.67*** (0.44)
Population density (km2)	-0.56 (0.34)	-0.76** (0.30)	0.25* (0.15)
Young age dependency ratio	-0.81*** (0.11)	-0.68*** (0.12)	-0.28*** (0.07)
% employment high-skill occs	-0.35*** (0.07)	-0.33*** (0.07)	-0.06* (0.03)
% employment medium-skill occs	-0.87*** (0.10)	-0.75*** (0.11)	-0.19*** (0.05)
% employment manufacturing	0.12** (0.05)	0.10** (0.05)	0.07*** (0.03)
% employment services	-0.26*** (0.04)	-0.19*** (0.06)	-0.05 (0.03)
Municipal expenses (2000, per cap)	0.95* (0.53)	0.55 (0.41)	0.11 (0.31)
Average yrs. educ, politicians	-0.07 (0.10)	-0.10 (0.10)	0.03 (0.05)
Sh. politicians white collar occs	-0.86 (0.70)	-0.62 (0.76)	-0.66 (0.46)
Observations		11,804	
R ²	0.39	0.24	0.26
Mean	15.55	7.92	5.99
Standard deviation	23.84	20.74	12.41

Notes: Estimation output of Equation 4. The outcome variables are the share of commitments never paid out (Column (1)), the share of commitments to never started projects (Column (2)) and the share of commitments to incomplete (started) projects (Column (3)). The main regressors of interest are administrative capacity, measured as the number of public employees in each municipality per 1000 inhabitants (winsorized at 1% and 99%), and corruption per capita, measured as the number corruption charges in the municipality per 1000 inhabitants (winsorized at 5% and 95%). Both regressors are standardized. The specification additionally controls for funding period fixed effect, province fixed effects and the following municipality-level controls: dummies for provincial capital status and coastal location; population density, young age dependency ratio, share of employment in high-skill and medium-skill occupations, share of employment in manufacturing and services; municipality expenses per capita, characteristics of local politicians (average number of years of education and share of those employed in white-collar occupations). Standard errors clustered by province are in parentheses. * p<0.10, ** p<0.05, *** p<0.01.

Appendix Table A.6: Payments to Incomplete (Started) Projects

	(1)	(2)
Administrative capacity	-0.44*** (0.12)	-1.51*** (0.42)
Corruption	8.66** (4.07)	0.72** (0.34)
Observations	11,590	
R ²	0.42	
Mean	19.01	
Standard deviation	30.51	

Notes: Estimation output of Equation 4. The outcome variable is the percent of payments to incomplete (but started) projects. The main regressors of interest are administrative capacity, measured as the number of public employees in each municipality per 1000 inhabitants (winsorized at 1% and 99%), and corruption per capita, measured as the number corruption charges in the municipality per 1000 inhabitants (winsorized at 5% and 95%). In Column (2), both regressors are standardized. The specification additionally controls for funding period fixed effect, province fixed effects and the following municipality-level controls: dummies for provincial capital status and coastal location; population density, young age dependency ratio, share of employment in high-skill and medium-skill occupations, share of employment in manufacturing and services; municipality expenses per capita, characteristics of local politicians (average number of years of education and share of those employed in white-collar occupations). Standard errors clustered by province are in parentheses. * p<0.10, ** p<0.05, *** p<0.01.