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Legislative interventions for the Italian local public financial distress¹

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Abstract

From 1989 until 2018, almost 600 Italian municipalities experienced financial distress. The aim of the present study is i) to investigate the historical and geographical evolution of this bankruptcy procedure over thirty years; ii) to test if the exogenous Italian legislation on local administration defaults was influencing the dynamics of the local financial distress phenomenon by identifying three different regulatory regimes; iii) to understand whether those legislative interventions were more likely to be designed as a rectification procedure with immediate effects rather than a structural reform tool with delayed but potentially more foresight-informed policy consequences. Our results show that the regulatory regime until 2001 which had foreseen the government bail-out of the local defaults encouraged municipalities to use the bankruptcy procedures, unlike from 2002 when the legislative interventions have been updated there is no longer any incentive. Moreover, the distribution of local financial distresses has a strong geographical dimension and confirms the “North-South divide. Finally, they had mainly a rectification effect on the short term which determined that the phenomenon of local defaults still requires to be fully addressed and regulated with several bureaucracy and opportunity costs.

Key words: financial distress, local authorities, Italy

JEL codes: H63, H77, H81, R11

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1. Introduction

Over 30 years ago, in 1989, the financial distress procedure was introduced in Italy for municipalities under bankruptcy. Initially, the bail-out was introduced by the Central Government to cope with a critical situation of an increasing number of local authorities under financial distress. Then, from 1993, following the private sector bankruptcy procedure, municipalities' managers remain responsible only for the ordinary operations while they are under strict control of an external liquidation committee for the financial management (Gori and Fissi, 2012). Over the years, several regulatory changes have occurred to better discipline the municipal financial distress procedure, to accomplish the accountability principle and avoid selfish and unfair behaviour of local policy makers arising from informational asymmetry to the detriment of the Central Government. The most important, the reform of the Title V of the Italian Constitution in 2001, and the reformulation of the Article 119 of the Italian Constitution in 2012, with the definition of the principles of fiscal federalism, redistributed the legislative powers between the Central Government and local authorities delegating greater responsibility to the latter management for the Domestic Stability Pact (DSP) parameters' accomplishment.

Our research aims to study if and how fiscal regulations had a role on Italian municipalities' financial distress. In particular, we try to understand if the Italian legislation on local administration defaults, which for the first decade was characterized by the government bail-out, encouraged bankruptcy procedures by the municipalities. Then, we test the presence of a switching regime after 2001, when a stalemate in the number of distress procedures has been registered as a consequence of the lack of convenience in activating a procedure, that no longer led to the state assumption of debts in the form of a mortgage with amortization paid by the Treasury rather, than to the achievement of stable financial conditions by local authorities (Degni, 2017). Similarly, we are interested to investigate the effects of the 2012 legislation, which introduced tighter budget constraints rules at all levels of governance, and try to determine over the sovereign crisis period whether it gave *the coup de grace* to local administrations with already profoundly deteriorated fiscal balances.

Finally, we are interested to understand whether those interventions were more likely to be designed as a rectification procedure with immediate effects rather than a structural reform tool with delayed but structural effects.

According to our knowledge, there are few empirical contributions which analysed the Italian local distresses. Gregori and Marattin (2019) are among the few who, by using budget data, investigated the main determinants of the default probability of Italian municipalities for a relatively short time span ranging from 2000 to 2012. In carrying out such type of analyses, among the main difficulties encountered by scientists, that we have also faced, there is the lack of fine data on local financial conditions for long time spans. However, despite these challenges, we achieved to collect data on the financial distresses of Italian municipalities between 1989 and 2018. This has been tackled as we believe that it has become increasingly important for Italy, and more generally for the European Union (EU) Member states, to identify what are the main legislative, political, economic and financial factors that may lead to default municipalities, especially after the measures adopted as a consequence of the 2008 crisis and the sovereign debt crisis. Our study, in spite focussing upon the Italian case study, has a broader EU perspective since the fiscal regulations arising from the principle of the Stability and Growth Pact (SGP) involve all the local governments in the effort to meet the general government EU target in terms of deficit and stock of debit reduction, but their consequences on local government financial management have been poorly addressed in literature. To this extent, Guarini (2012) tries to fill this knowledge gap and analyse the accounting issues originating from the SGP and the tricks adopted by Italian local authorities to avoid fiscal constraints that arise from it, eventually leading to undermine budgetary outcomes for the entire government.

The debate on local finance with a focus on the local exposure to indebtedness has been tackled mainly from two perspectives regarding either the determinants of sub national public debt (see Balaguer-Coll *et al.*, 2016; Gaillard, 2009, among others) or the fiscal regulation and federalism effectiveness (Barret and Feld, 2018; Venturini, 2020), respectively. The second strand of literature, particularly relevant for our study, tries to understand whether and how fiscal adjustments can

improve welfare systems sustainability (Alesina and Perotti, 1996). Some studies account for the impact of national or supranational fiscal regulation on the budget of municipalities, for instance, focusing on the implications of the DSP. Grembi *et al.* (2016) analyse the effects of fiscal rule within-country, applying a quasi-experimental design for Italy. Their findings show that relaxing fiscal rules increases the local deficits. More recently, Venturini (2020), taking as a point of departure the positive effect of fiscal rules on subnational governments' budgets, investigates the possible trade-off and side effects of rules on the composition of local expenditure, while Daniele and Giommoni (2021) look at the effect of the DSP on constraining public spending at local level finding a positive impact in terms of reduced exposure to corruption, as induced by a potential accountability reason.

Another important implication of the fiscal regulations is related to the bail-out risk following the default. Along this line we consider the principal-agent perspective of Persson and Tabellini (1996) particularly suitable for providing a theoretical background which inspired our analysis. According to the authors, the trade-off between risk sharing and moral hazard arises from federations of regions. Federal risk sharing may create incentives for local authorities to implement policies that increase local risk exposing themselves to the risk of default as the burden will be borne by the central government. This is all the more true if risk sharing imposes to comply requirements deriving from the EU in which policy makers are somehow more difficult to identify (Heinkelmann-Wild and Zangl, 2020). To avoid opportunistic behaviours, the central government may make local government more responsible favouring fiscal federalism. However, given the autonomy in the allocation of resources guaranteed to local governments, they can have differential effects on the aggregate public budget. For this reason, autonomy is often combined with public fiscal consolidation (Venturini, 2020).

Our analysis provides evidence on how national legislative interventions affect the local financial distress phenomenon. First, we find that the legislative interventions have a positive significant immediate impact on the default declarations among local authorities. The regulatory regime incurred over the 1989-2001 period which had foreseen the government bail-out of the financial distressed municipalities, encouraged the bankruptcy procedure. Differently, the switching regulatory regime

after 2001, when the Reform of Title V introduced the no bail-out clause, has discouraged local policymakers to declare defaults as their debt is no longer borne by the Central Government. Moreover, the increase in the local financial distresses from 2012 may be mainly attributed to the sovereign debt crisis. Furthermore, we empirically prove that the local financial distress procedure is purely a Southern issue which adds to the age-old question of the Mezzogiorno and the North-South gap.

Finally, testing the persistence of the legislative impact on local defaults, we find those legislative interventions have been non-structural but timely rectification-type actions.

The results are potentially useful for both the Italian and European Legislator to provide her/him with a key to understand the dynamics occurred over time and to help addressing the possible regulatory updates and for policy makers at all levels to better target their interventions.

The rest of the paper is organized as follows. Section 2 discusses the historical evolution of legal and procedural aspects of the financial distress peculiar to the Italian context. It also describes the dynamics of the phenomenon under analysis among the Italian macro-regions. Section 3 illustrates data employed and estimation techniques. The results are presented in Section 4. Finally, Section 5 concludes.

2. The Italian local financial disruption: the historical evolution of regulatory aspects

2.1. The historical evolution of regulatory aspects

The most influential legislative interventions aimed at ruling financial budgets of municipalities occurred between 1989 and 2018 and granted greater autonomy to local authorities over the years.² By analysing the default procedure over the years, three regulatory regimes related to the evolution of the fiscal default management approach can be identified as illustrated in Table 1. The first regime, which started with the Law n. 144/1989 that introduced a complex procedure for the detection and

² Table A1 in Appendix reports the legislative interventions on local financial distress occurred over the period under analysis.

payment of debts, on the one hand, and for the financial recovery, on the other, is characterized by the bail-out of the Central. Precisely, municipalities could be bailed out by the Central Government, which guaranteed their debts, as the troubled ones were allowed to take out a loan with the Cassa Depositi e Prestiti³ to finance the debt prior to the date of declaration of the insolvency. So, the burden was entirely borne by the National Government and, for the ordinary management, for which the hypothesis of a stable balance sheet was envisaged, a ten-year non-mandatory deadline was set for the recovery. However, as deadlines for the compliance were not mandatory, many municipalities, once declared the failure, did not adopt the consequent necessary measures. Therefore, the legislator has been forced to intervene again to resolve the situation that had arisen by reviewing the procedure bringing it closer to those of private bankruptcy. Then, the Law n. 68/1993 has foreseen that the municipalities retain the competence to adopt the measures concerning their reorganisation by introducing a liquidation committee responsible for it. The new liquidation body assumes all competences regarding the payment of the previous debts. Furthermore, the State contribution for the payment of previous debts is quantified in relation to the population of the troubled municipality with a maximum agreed ceiling. For each case of default, if the amount of the loan that disbursed added to the proceeds from the alienation of the municipality's assets was not sufficient to repay the past debts, the liquidation of a percentage of the debts was envisaged. Subsequently, the Law n. 267/2000 set the rules that concern local authorities in a condition of financial distress and the related financial recovery procedures.

Table 1: Legislative regimes of financial distress

Legislation	Regime	Time
Law n. 144/1989	Financial distress procedure	1989-2001
Law n. 3/2001	Title V Reform	2002-2011
Law n. 243/2012	DSP Reform	2012-2018

³ Cassa Depositi e Prestiti (CDP) is an Italian financial institution, in the form of a joint stock company, controlled for about 83% by the Ministry of Economy and Finance and about 16% by various banking foundations.

The second regulatory regime is identified with the reform of the Title V of the Constitution (Constitutional Law n. 3/2001) that strengthened the process of decentralisation from the Central Government to the local autonomies, including regions, provinces and municipalities, in compliance with the principle of vertical subsidiarity, and with the European Union prescriptions provided by the Charter of Local Self-Government, seeking to aware local policy makers. The 2001 legislative intervention marked a turning point between what could easily be defined as old legislation, still valid for those municipalities that declared failure before the reform and which to date have had not yet closed the rebalancing procedure, and the new legislation that upsets and redefines the limits and actions of the entities and all the actors involved. Indeed, after the reform, the no bail-out clause has been introduced. Thus, this reform can be considered as a regime change with respect to the previous legislative framework. In addition, for all the municipalities that declared bankruptcy after 2001, the possibility of contracting the loan continues but without charges to be borne by the Central Government for investment expenses (*golden rule*) and for off-balance sheet debts contracted before that date.

Finally, another key step in the bankruptcy procedure of local authorities which identifies our third regime happened in 2012 when, with the art. 243-ter of the TUEL, the decentralisation process has been completed and the crackdown on national public spending imposed by the DSP tightened, incorporating the directives issued with the SGP enacted within the European Community. This, however, has placed local authorities not in an easy condition to perform their functions and tasks, due to strict rules to which they have to comply. The legislator, indeed, has now provided for a multi-year financial rebalancing procedure, with a maximum duration of ten years, for the municipalities and provinces for which there are structural imbalances of the budget capable of causing financial distress. For the financial reorganization of the local authorities that approved the financial rebalancing procedure the Central Government provides for an advance from the “Revolving fund” for ensuring the financial stability of local authorities, to be returned in a maximum period of ten years starting from the year following the first in which it is dispensed. Over these more than thirty

years, several other legislative interventions have been proposed to regulate the phenomenon by making more or less important updates to the procedure but without upsetting its overall content.

2.2 An exploratory analysis of financial disruption

Since 1989, about 600 financial distresses have affected small and medium municipalities (up to 60.000 residents⁴) in Italy. The distribution of financial distresses illustrated in Figure 1 has a strong geographical dimension and confirms the “North-South divide”:⁵ the majority of the financial distresses, over 80%, happened in municipalities of Southern Italy (red line), followed by Central ones (blue line), about 11%. Only 7% of municipalities of the Northern Italy (green line) experienced a financial distress. The distribution of the phenomenon by region is particularly interesting: about 40% of municipalities in Calabria and the 25% in Campania have resorted at least once to the procedures of instability, while the 13% in Sicily and 17% in Puglia. Moreover, about 6% of the total distresses are “recidivist”, because have experienced more than one financial distress in the reporting period. Among the most virtuous cases, municipalities in Northern regions of Trentino Alto Adige, Friuli Venezia Giulia and Valle d’Aosta never experienced cases of instability in almost thirty years. Controlling for the size of the municipalities in terms of population, the majority of those that were more hit, 62%, have less than 5,000 inhabitants and, until this threshold, Degni (2017) observes that the percentage of municipalities under financial distress increases with the rise of the resident population.

The number of municipalities that were under the distress procedures over the 1989-2018 period shows a U-shaped dynamic as illustrated in Figure 1. After the peak of 1989, in which the Law no.

⁴ Small and medium municipalities are classified according to art. 156, D.lgs. 18 August 2000, n. 267 (TUEL), covering the classes a) – h), and the main criterion is the demographic size. However, among medium municipalities, 11 municipalities exceeding 60.000 residents are accounted for. Results are robust when isolating those municipalities (see Table B3 in Appendix B).

⁵ In Italy, Northern regions are: Valle d’Aosta, Piedmont, Lombardy, Veneto, Trentino Alto Adige, Friuli Venezia Giulia and Emilia Romagna. Centre regions are: Tuscany, Umbria, Marche, Latium. Southern regions are: Abruzzo, Basilicata, Calabria, Campania, Molise and Puglia. The islands of Sicily and Sardinia are conventionally considered as Southern regions.

144/1989 was introduced, a period of stability preceded both the financial and sovereign debt crisis when the phenomenon intensified.

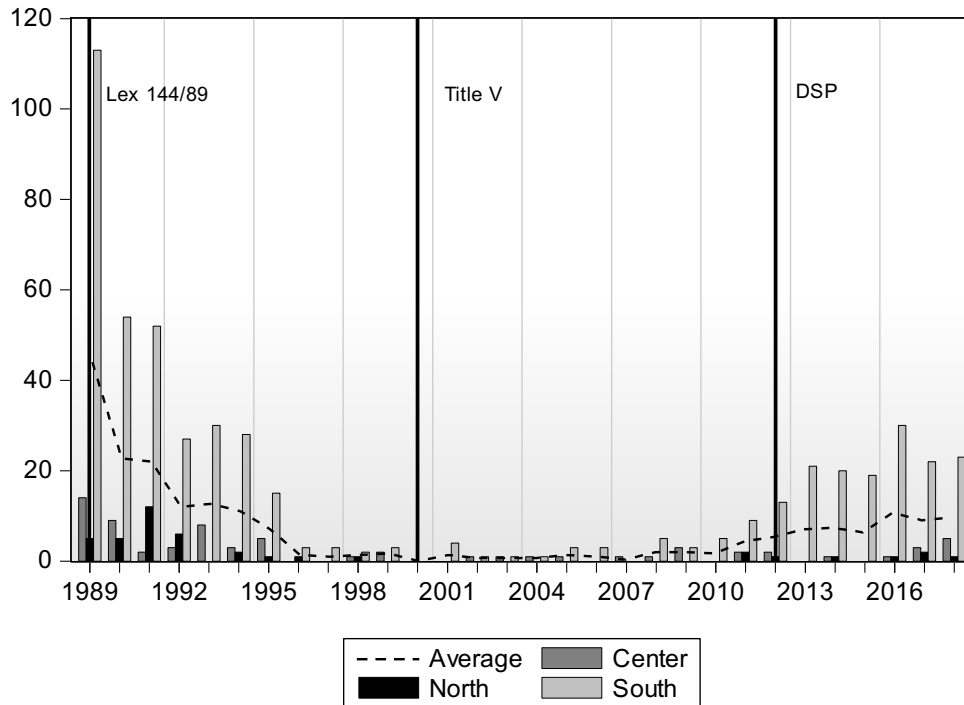


Figure 1: Number of financial distresses in Italian territory by year. Black bold lines illustrate the main legislations.

Indebtedness can be considered as one of the key drivers of financial distress. An increase in municipalities' debt might cause a rising default probability (Gregori and Marattin, 2019). At the end of 2018, the local authorities' debt amounted to 44.6 billion, of which 37.7 billion for municipalities and the remaining 6.9 billion for provinces.⁶ It represents about 3% of the Italian GDP. Moreover, the annual interest rate paid by local authorities on existing debt is on average over 4% (OCPI, 2021). Compared to the Central Government, local authorities like municipalities, provinces and regions have restricted access to financial markets, which entails unfavourable borrowing conditions. Although the local debt is negligible compared to the national debt, the phenomenon is relevant, given the amounts that the Central Government has assigned for municipalities' recovery. For instance, in order to support rebalancing procedures, the Central Government allocated resources through the

⁶ Information is retrieved from Bank of Italy.

Revolving Fund, which funds liquidity advances with long maturity. From 2012 to 2017, it has allocated around 1.5 billion of euros. In addition, consideration must be given to administrative and social costs (opportunity costs) faced by local authorities and the general public because of the corrective budgetary measures introduced over the years.

3. Data and Empirical Methodology

3.1 Data

We collect annual data on default declarations provided by the Italian Ministry of the Interior, Italian Court of Audit, and Ca' Foscari Foundation over the period 1989–2018 for 95 Italian provinces.⁷ Our dependent variable, the *Financial distress*, is measured aggregating the number of defaults of each local municipality by province.⁸ To ensure a cross-provincial comparability, we normalise the data weighting the number of financial distresses by the share of the province population living in these municipalities, as in Acconcia *et al.* (2014). This procedure has been necessary due to the lack of time series at municipal level and has been adopted recently by Acconcia *et al.* (2014) to analyse the output multiplier of spending cuts at provincial level using an instrumental variables strategy based on city council dismissals because of mafia infiltration, and thus of large, unanticipated, temporary contractions in local public spending.

Figure 2 shows the number of financial distresses weighted by province and averaged over the period 1989-2018. The North-South patterns mentioned in Section 2.2 is clearly confirmed.

⁷ The analysis does not include provinces born after 1989.

⁸ We account just for the financial distress procedure, excluding the financial rebalancing procedure introduced in 2012 (see Section 2.1).

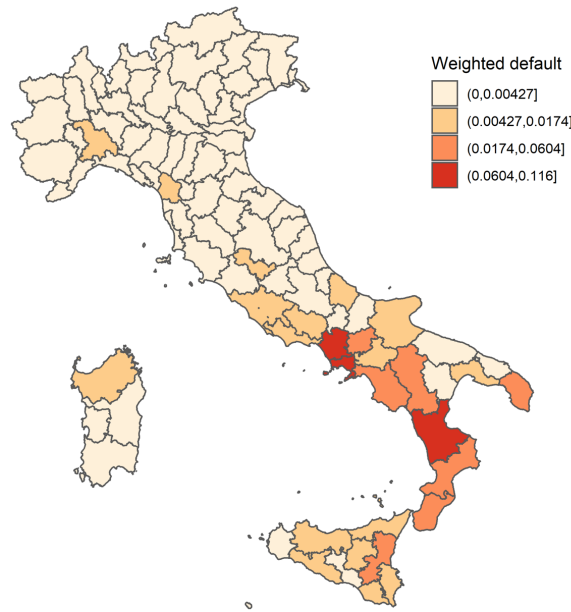


Figure 2: Population weighted financial distresses in Italian provinces, period 1989-2018.

Legislative interventions are considered to assess the key role of a change in the mentioned regulations on the (weighted) financial distresses. The variable is constructed as a dummy that takes value one when the Legislator intervened with regulatory updates on the financial distress procedure (see Table 1A), zero otherwise. Then, the dummy variable *Title V Reform* accounts for the period where the regulation change of the reform of Title V occurred by taking value one from 2002 to 2018, zero otherwise. Moreover, given the importance of year 2012 in distinguishing pre- and post-sovereign debt crisis and identifying the introduction of the DSP, we include the dummy variable *DSP Regime* taking value one over the years 2012-2018, zero otherwise.

We also include several controls⁹ relying on the literature on local financial distresses that identifies several determinants of local debt (Gaillard, 2009; Guillamón *et al.*, 2011). Whether the level of indebtedness in sub-national government is high, the probability of local default is more likely to increase. Hence, we collected socio-economic and political data that can impact on the municipal debt, following Balaguer-Coll *et al.* (2016).

⁹ Details on data sources can be found in Appendix A (Table A2).

According to Guillamón *et al.* (2011), a first set of factors that may affect local government debt and hence their likelihood of declaring default are related to the economic and financial conditions of each local economy. Thus, among the covariates, we consider the logarithm of the *Gross value added (GVA) per workers* at constant price, to account for the fiscal capacity of local governments. Indeed, the local growth increases the level of total revenues and reduces the probability to borrow resources for debt sustainability. In order to control for the export propensity of each province, we consider the trade-to-GDP ratio (variable *Trade openness*). As customary, the index is calculated as the sum of real exports and imports as a share of local GDP in percentage. To account for the composition of industry structure of provinces, the variable *Share of employment in tradable sectors over non-tradable*¹⁰ (*Employment T/NT*) is also included. Tradable sectors of an economy typically favour productivity growth, as these sectors have to compete in global markets and, hence, are better able to catch up with the productivity leaders. On the other hand, the industry structure based on tradable sectors may be more exposed to external shocks, especially if not diversified. We also account for the number of *Bank agencies* per thousands of people. This measure aims to capture the dynamism of local banking system and the well-functioning of credit channel in fostering the economic activity. Regarding political variables, many contributions have linked the debt dynamics to aspects of political nature, such as political fragmentation, ideology (progressive or conservative), or the length of electoral mandates. They refer to the public business cycles theories (Nordhaus 1975; Hibbs, 1977; Alesina, 1987), according to which politicians aim to maximise the possibility of being re-elected by adopting policy measures with immediate effect on the electorate and delayed effects on real economy. To capture the impact of political elections on financial distress, we include a dummy variable related to *Elections* that takes the value one in the voting year in each province. Furthermore, the political theory traditionally claims that left-wing governments are laxer in their fiscal account management. Left-wing governments would be more inclined to active interventionism in the

¹⁰ Tradable industries are selected according to the classification on technological intensity provided by Eurostat (NACE Rev.2. Tradable=agriculture, forestry, and fishing; industry excluding construction; financial & business services.

economic activity than right-wing governments, making the local public institutions more indebted (Benito and Bastida, 2004). However, some studies sustain that the right-wing governments accumulate more debt when they expect not to be re-elected (see, for instance, Pettersson-Lidbom, 2001). We investigate the behaviour of policymakers reconstructing a categorical variable related to the *Political ideology*, which takes into account the dichotomy between the right-wing and left-wing governments, to which we assign one and zero respectively, and a dummy variable on *Political discontinuity* having value one for the change in political ideology in each election, i.e. if there is political discontinuity, zero otherwise.

Finally, a geographical dummy variable indicating provinces belonging to Northern or Southern Italy has been added to account for.

3.2 Empirical technique

In our empirical framework, our variable of interest is a dummy taking value 1 for years corresponding to the political interventions (see Table 1). Thus, in our panel setting time dummies are relevant and need to be modelled substantively. Therefore, we control for time dynamics adding provincial time trend, as recently proposed by Hassell *et al.* (2020). Our fully specified model is formally described by the following equation:

$$\begin{aligned}
 \text{Financial distress}_{i,t} = & \alpha + \beta_1 \text{Nor. interv.}_{i,t} + \beta_2 \text{Title V Reform} + \beta_3 \text{Nor. interv.}_{i,t} \times \\
 & \text{Title V Reform} + \beta_4 \text{DSP Reform} + \beta_5 \text{Norm. interv.}_{i,t} \times \text{DSP Reform} + \\
 & \beta_6 \text{Socio econ. var}_t + \beta_7 \text{Political var}_t + \text{geo}_i + \zeta_i + \beta_4 \text{time trend}_i + \varepsilon_{i,t}
 \end{aligned} \tag{1}$$

where i is the i^{th} Italian province of which there are n , with $n = 95$, and t the year of which there are T , with $T = 30$. The variable $\text{Norm. interv.}_{i,t}$ is referred to the legislative interventions occurred over the period under analysis (see Appendix A Table A1). *Title V Reform* and *DSP Reform* variables are referred to the three regulatory regimes identified, as specified in Table 1. They are

interacted with the dummies on the legislative interventions to check if the impact of the latter is conditioned by the regime. Parameters β_1 to β_5 are the respective coefficients to be estimated. *Socio econ. var_t* and *Political var_t* are the vector of socio-economic variables and political variables, respectively (see Table 3A in Appendix for the descriptive statistics). β_6 and β_7 are the respective vectors of coefficients. ζ_i is a province-specific fixed effect, geo_i a dummy characterizing Northern or Southern provinces, with Centre provinces taken as a reference category, and $time\ trend_i$ is the linear time trend. Finally, $\varepsilon_{i,t}$ is the idiosyncratic error term.

In addition to our baseline model, we perform various robustness checks. In particular, we estimate our empirical model by geographical area, following what shown in Figure 1 and 2. In addition, by considering lagged legislative interventions, we checked if they have an immediate or delayed effect on the financial distresses and can be considered more as a rectification procedure rather than a structural reform tool.

4. Empirical results

4.1 The impact of legislative intervention on financial distress

Table 2 reports the results of our analysis. We immediately observe that the legislative interventions on local financial distresses have a positive significant immediate impact on the default declarations among local authorities. The positive impact is driven by the first default management measures over the 1989-2001 period. Precisely, according to the Law n. 144/1989, the Central Government would guarantee the debts incurred by financial distressed municipalities to finance the debt before the date of declaration of the insolvency. Therefore, as the burden is borne by the State, the government bailout encouraged municipalities to use the bankruptcy procedures to restore public finances.

By considering the switching regime from 2002, the variable *Title V Reform* is significant at 10 per cent level, meaning that the exogenous legislative change does not increase the likelihood that Italian municipalities default, compared to the previous regime. The interaction term with the legislative interventions, *Legislative interventions* \times *Title V Reform*, is significant and negative.

However, the joint marginal effect of *Legislative interventions* and *Legislative interventions* \times *Title V Reform*, in spite generally statistically significant, is close to zero and not statistically significant, confirming that the effect of the regulatory change from 2002 onwards has no effect on the probability of declaring default. This finding corroborates our preliminary hypothesis whereby the no bail-out clause stresses the lack of convenience in activating the bankruptcy procedure. Differently from previous legislation, specific default risks can no longer be transferred to the Central Government after the Title V reform. This means that local governments are no longer encouraged to accumulate debt and declare bankruptcy to then be bailed out.

The second regime *DSP Reform* is identified from 2012 onwards, after the introduction of the DSP as a consequence of the debt crisis. As reported in Table 2, the regime dummy *DSP Reform* is positive and significant. However, the interaction with the legislative interventions *Legislative interventions* \times *DSP Reform* is significant and negative. Therefore, the joint effect of *Legislative interventions* and the interaction term with *DSP Reform* is again close to zero in spite statistically not different from zero. This means that, *ceteris paribus*, over the period going from 2012 to 2018 the likelihood of declaring defaults increases compared to the first benchmark period, but regulatory changes within that period are not more likely to lead to default than regulatory changes in other periods. Nevertheless, we may assume that the rising number of financial distress declarations is likely to be related to the concomitance of more restrictive fiscal rules as introduced in 2012 and the sovereign debt crisis, which favored the systematic recourse to insolvency procedures, the effects of which are hard to discern from each other.¹¹

¹¹ Despite the trend of the local financial distresses is increasing slowly from 2009 onwards, as illustrated in Figure 1, estimates which tried to capture the punctual effect of the financial crisis on the local default declarations were not significant. Results are available upon request.

Table 2: Estimation results

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.018*** (0.005)	0.009* (0.005)	0.930** (0.471)	1.003* (0.520)	0.014* (0.007)	0.979* (0.527)
Legislative interventions	0.027** (0.011)	0.027** (0.011)	0.025** (0.011)	0.026** (0.011)	0.026** (0.011)	0.026** (0.011)
Legislative interventions × Title V Reform	-0.029** (0.013)	-0.029** (0.013)	-0.025** (0.012)	-0.025** (0.012)	-0.029** (0.013)	-0.025** (0.012)
Legislative interventions × DSP Reform	-0.032** (0.013)	-0.032** (0.013)	-0.025** (0.012)	-0.026** (0.013)	-0.032** (0.013)	-0.026** (0.013)
Title V Reform	0.014* (0.008)	0.014* (0.008)	0.012* (0.006)	0.009* (0.006)	0.013* (0.008)	0.009 (0.006)
DSP Reform	0.039*** (0.014)	0.039*** (0.014)	0.025** (0.010)	0.028*** (0.011)	0.038*** (0.014)	0.027** (0.011)
log(GVA per workers)			-0.084** (0.043)	-0.095** (0.047)		-0.092* (0.048)
Employment T/NT				0.046 (0.060)		0.045 (0.059)
Bank agencies				0.386 (0.247)		0.434* (0.251)
Trade openness						-0.002 (0.005)
Elections					-0.001 (0.002)	-0.002 (0.002)
Political discontinuity					0.003 (0.003)	0.003 (0.003)
Political ideology					0.006 (0.005)	0.005 (0.005)
Dummy North		-0.0005*** (0.00001)	0.005* (0.003)	-0.019 (0.030)		-0.015 (0.036)
Dummy South		0.010*** (0.00001)	-0.008 (0.009)	0.004 (0.011)		0.002 (0.013)
Time trend	-0.002** (0.001)	-0.002** (0.001)	-0.001** (0.001)	-0.001* (0.001)	-0.002** (0.001)	-0.001* (0.001)
Observations	2,850	2,850	2,755	2,755	2,850	2,755
R ²	0.090	0.090	0.096	0.098	0.090	0.099
Adjusted R ²	0.056	0.056	0.062	0.063	0.056	0.063

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend. Joint hypothesis testing, based on the F-Statistic, confirms that the coefficients of *Legislative interventions* and *Legislative interventions* × *Title V Reform* are jointly statistically different from zero at 5% level in all cases. The same test for *Legislative interventions* and *Legislative interventions* × *DSP Reform* confirms that the coefficients are always statistically different from zero at 5% level.

Moving to the control variables, by looking at the socio-economic factors, we observe that the only one statistically different from zero is the GVA per capita that has negative sign, indicating that wealthier provinces are less likely to be exposed to high debts and risk of declaring default probably because of the greater fiscal capacity. The fact that other variables have no effect highlights even more the role GVA per capita. Indeed, the presence of bank agencies, a high weight of tradable sector and a high openness may be viewed as confounding factors.

Regarding to the political variables, we have that neither the dummy regarding the elections, political discontinuity nor political ideology are statistically significant, meaning that some of the factors cited by the literature as crucial in explaining financial distresses and misuse of public funding, in our specific case do not hold. Therefore, the phenomenon of the Italian local financial distress does not appear to have a political connotation over the period under analysis.

Finally, geographical dummies are not statistically significant, except for the second model in which the Southern authorities show a greater willingness to declare bankruptcy.

These results are robust to different specifications which are provided in Appendix B. In particular, Table B1 illustrated estimates only for the regimes variables, therefore excluding the legislative interventions, and Table B2 provides the reverse results. In the first case signs and significance of the regimes are confirmed and in the second case the legislative interventions continue to be positive and statistically significant. Our main results are even confirmed when controlling for the relatively small demographic size of the phenomenon, thus isolating the big municipalities with more than 60,000 inhabitants (Table B3).

4.2 Is there a North-South divide in the local financial distress procedure?

As illustrated above, the distribution of financial distresses has a strong geographical dimension. The descriptive analysis suggests that the phenomenon is mostly concentrated in the South. In this section, we try to empirically check the evidence of a Southern issue.

Table 3: Panel estimation results – Northern Italy

	(1)	(2)	(3)	(4)	(5)
Constant	0.008*** (0.0005)	0.040 (0.025)	0.042** (0.017)	0.008*** (0.001)	0.044** (0.020)
Legislative interventions	0.0001 (0.0004)	0.00002 (0.0005)	0.0001 (0.0005)	0.00002 (0.0005)	-0.00002 (0.0005)
Legislative interventions × Title V Reform	-0.0003 (0.001)	-0.0002 (0.001)	-0.0002 (0.001)	-0.0003 (0.001)	-0.0001 (0.001)
Legislative interventions × DSP Reform	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)
Title V Reform	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
DSP Reform	0.002* (0.001)	0.001 (0.001)	0.002 (0.001)	0.002* (0.001)	0.001 (0.001)
log(GVA per workers)		-0.003 (0.002)	-0.003* (0.002)		-0.003* (0.002)
Employment T/NT			-0.002 (0.003)		-0.002 (0.003)
Bank agencies			0.005 (0.032)		-0.003 (0.024)
Trade openness					0.0004 (0.001)
Elections				-0.001 (0.001)	-0.001 (0.001)
Political discontinuity				0.0002 (0.0005)	0.0002 (0.001)
Political ideology				-0.001 (0.0004)	-0.001 (0.0004)
Time trend	-0.0001* (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001* (0.0001)	-0.0001 (0.0001)
Observations	1,230	1,189	1,189	1,230	1,189
R ²	0.044	0.045	0.046	0.045	0.047
Adjusted R ²	0.007	0.006	0.005	0.005	0.003

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend. Joint hypothesis testing, based on the F-Statistic, confirms that the coefficients of *Legislative interventions* and *Legislative interventions × Title V Reform* are never jointly statistically different from zero at 5%. The same test for *Legislative interventions* and *Legislative interventions × DSP Reform* confirms that the coefficients are never statistically different from zero at 5% level.

Table 4: Panel estimation results – Centre Italy

	(1)	(2)	(3)	(4)	(5)
Constant	-0.001 (0.002)	0.184 (0.200)	0.180 (0.197)	-0.002 (0.003)	0.149 (0.171)
Legislative interventions	0.005 (0.004)	0.005 (0.004)	0.005 (0.004)	0.005 (0.004)	0.005 (0.004)
Legislative interventions \times Title V Reform	-0.004 (0.005)	-0.004 (0.005)	-0.004 (0.005)	-0.004 (0.005)	-0.004 (0.005)
Legislative interventions \times DSP Reform	-0.011 (0.008)	-0.002 (0.005)	-0.002 (0.005)	-0.011 (0.008)	-0.003 (0.005)
Title V Reform	-0.001 (0.003)	0.002 (0.002)	0.002 (0.002)	-0.001 (0.004)	0.001 (0.002)
DSP Reform	0.007* (0.004)	0.003 (0.004)	0.002 (0.004)	0.007 (0.004)	0.002 (0.004)
log(GVA per workers)		-0.017 (0.018)	-0.016 (0.019)		-0.011 (0.016)
Employment T/NT			-0.005 (0.016)		-0.005 (0.016)
Bank agencies			-0.054 (0.068)		-0.026 (0.069)
Trade openness					-0.003 (0.002)
Elections				0.001 (0.003)	0.001 (0.003)
Political discontinuity				-0.001 (0.003)	-0.0001 (0.003)
Political ideology				0.005 (0.003)	0.003 (0.002)
Time trend	-0.00001 (0.0003)	-0.0002 (0.0002)	-0.0002 (0.0002)	0.0001 (0.0003)	-0.0001 (0.0002)
Observations	600	580	580	600	580
R ²	0.052	0.078	0.080	0.055	0.088
Adjusted R ²	0.010	0.035	0.033	0.008	0.035

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend. Joint hypothesis testing, based on the F-Statistic, confirms that the coefficients of *Legislative interventions* and *Legislative interventions \times Title V Reform* are jointly statistically different from zero at 5% for model (2), (3) and (5). The same test for *Legislative interventions* and *Legislative interventions \times DSP Reform* confirms that the coefficients are statistically different from zero at 5% level for model (2), (3) and (5).

Table 5: Panel estimation results – Southern Italy

	(1)	(2)	(3)	(4)	(5)
Constant	0.033** (0.013)	2.438** (1.202)	2.172 (1.329)	0.022 (0.016)	2.189 (1.351)
Legislative interventions	0.071** (0.030)	0.069** (0.029)	0.069** (0.029)	0.071** (0.030)	0.069** (0.029)
Legislative interventions × Title V Reform	-0.078** (0.035)	-0.071** (0.032)	-0.070** (0.032)	-0.078** (0.034)	-0.071** (0.033)
Legislative interventions × DSP Reform	-0.084** (0.034)	-0.072** (0.032)	-0.071** (0.033)	-0.085** (0.035)	-0.071** (0.033)
Title V Reform	0.039* (0.021)	0.033* (0.018)	0.032* (0.018)	0.038* (0.021)	0.033* (0.019)
DSP Reform	0.101*** (0.038)	0.069*** (0.027)	0.065*** (0.024)	0.100*** (0.038)	0.066** (0.027)
log(GVA per workers)		-0.224** (0.111)	-0.205* (0.120)		-0.209* (0.123)
Employment T/NT			0.126 (0.167)		0.116 (0.165)
Bank agencies			-0.167 (0.707)		-0.151 (0.697)
Trade openness					0.004 (0.007)
Elections				-0.002 (0.005)	-0.001 (0.005)
Political discontinuity				0.005 (0.008)	0.003 (0.008)
Political ideology				0.016 (0.011)	0.015 (0.010)
Time trend	-0.004** (0.002)	-0.003** (0.001)	-0.002* (0.001)	-0.004** (0.002)	-0.002* (0.001)
Observations	1,020	986	986	1,020	986
R ²	0.105	0.118	0.121	0.108	0.124
Adjusted R ²	0.069	0.081	0.081	0.069	0.081

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend. Joint hypothesis testing, based on the F-Statistic, confirms that the coefficients of *Legislative interventions* and *Legislative interventions* × *Title V Reform* are jointly statistically different from zero at 5% level in all cases. The same test for *Legislative interventions* and *Legislative interventions* × *DSP Reform* confirms that the coefficients are always statistically different from zero at 5% level.

The geographical dummies in the baseline estimation show that the Southern local authorities are more willing to declare default. The same finding is provided when the sample is splitted by geographical area. The following tables report the results for North, Centre, and South of Italy (Table 3, 4 and 5), respectively. We find no evidence of how bankruptcy regulations affect the default declaration in the Centre or in the Northern Italy. On the contrary, we observe a positive significant impact of regulations among Southern municipalities. Results are robust even if the impact of interaction terms is considered.¹²

4.2.1 Rectification or structural reform tools?

In Table 5, we show that the legislative interventions have an immediate and positive effect on the default declarations of municipalities. However, we tried to investigate further on this and test the persistence of the legislative impact on local defaults by performing a placebo test that simulates what would have happened to the local financial distress dynamics if a fake year of the regulatory adoption was used. Precisely, the analysis was replicated by assuming that the legislative adoption occurred 1 and 2 year(s) later than the true data. Moreover, we give a possible alternative interpretation to the results coming from the placebo test by formulating the hypothesis that, if lagged *Legislative interventions* are not significant, but have only a timely effect in t as above illustrated, thus they have a rectification effect. On the other hand, if the lagged *Legislative interventions* had been also statistically significant, this would mean that the Italian legislator has provided local authorities with a tool which they have accessed over the years that effectively regulated the phenomenon, as well as bottleneck situations.

¹² We perform robustness checks in Table B4 and B5 in Appendix B.

Table 6: Panel estimation results – Southern Italy (lag = 1)

	(1)	(2)	(3)	(4)	(5)
Constant	0.072*** (0.027)	2.499** (1.241)	2.250 (1.379)	0.063** (0.027)	2.248 (1.388)
Legislative interventions _{t-1}	-0.021 (0.013)	-0.026* (0.014)	-0.026* (0.014)	-0.018 (0.014)	-0.024 (0.015)
Legislative interventions _{t-1} × Title V Reform	-0.012 (0.013)	0.003 (0.013)	0.005 (0.013)	-0.015 (0.017)	0.002 (0.015)
Legislative interventions _{t-1} × DSP Reform	-0.006 (0.016)	0.016 (0.016)	0.017 (0.016)	-0.012 (0.018)	0.012 (0.017)
Title V Reform	0.056** (0.027)	0.044** (0.021)	0.043** (0.021)	0.055** (0.027)	0.043* (0.022)
DSP Reform	0.139*** (0.050)	0.093*** (0.035)	0.089*** (0.032)	0.137*** (0.049)	0.091*** (0.034)
log(GVA per workers)		-0.226** (0.114)	-0.209* (0.124)		-0.211* (0.126)
Employment T/NT			0.132 (0.167)		0.121 (0.164)
Bank agencies			-0.150 (0.698)		-0.129 (0.688)
Trade openness					0.004 (0.007)
Elections				-0.010 (0.006)	-0.006 (0.006)
Political discontinuity				0.001 (0.008)	-0.0004 (0.009)
Political ideology				0.016 (0.011)	0.015 (0.010)
Time trend	-0.007** (0.003)	-0.005** (0.002)	-0.004** (0.002)	-0.007** (0.003)	-0.005** (0.002)
Observations	1,019	985	982	1,019	982
R ²	0.087	0.099	0.102	0.092	0.105
Adjusted R ²	0.048	0.058	0.062	0.050	0.061

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend. Joint hypothesis testing, based on the F-Statistic, confirms that the coefficients of *Legislative interventions* and *Legislative interventions_{t-1} × Title V Reform* are jointly not statistically different from zero at 5% level in all cases except for model (1). The same test for *Legislative interventions* and *Legislative interventions_{t-1} × DSP Reform* confirms that the coefficients are never statistically different from zero at 5% level.

Table 7: Panel estimation results – Southern Italy (lag = 2)

	(1)	(2)	(3)	(4)	(5)
Constant	0.062** (0.025)	2.618* (1.353)	2.377 (1.464)	0.053** (0.026)	2.413 (1.492)
Legislative interventions _{t-2}	-0.014 (0.016)	-0.016 (0.017)	-0.017 (0.017)	-0.012 (0.016)	-0.016 (0.017)
Legislative interventions _{t-2} × Title V Reform	-0.004 (0.013)	0.003 (0.015)	0.004 (0.016)	-0.004 (0.015)	0.004 (0.017)
Legislative interventions _{t-2} × DSP Reform	0.030 (0.020)	0.021 (0.017)	0.022 (0.018)	0.029 (0.020)	0.021 (0.018)
Title V Reform	0.033* (0.018)	0.029** (0.014)	0.029** (0.015)	0.031* (0.018)	0.027* (0.015)
DSP Reform	0.084** (0.035)	0.065*** (0.024)	0.060*** (0.021)	0.079** (0.035)	0.058*** (0.022)
log(GVA per workers)		-0.238* (0.124)	-0.222* (0.133)		-0.227* (0.136)
Employment T/NT			0.137 (0.168)		0.127 (0.166)
Bank agencies			-0.181 (0.708)		-0.193 (0.712)
Trade openness					0.004 (0.006)
Elections				-0.008 (0.005)	-0.004 (0.005)
Political discontinuity				0.0003 (0.009)	-0.003 (0.010)
Political ideology				0.014 (0.010)	0.013 (0.010)
Time trend	-0.005** (0.002)	-0.004** (0.002)	-0.003** (0.002)	-0.005** (0.002)	-0.003** (0.002)
Observations	1,018	984	978	1,018	978
R ²	0.080	0.093	0.096	0.083	0.099
Adjusted R ²	0.040	0.052	0.056	0.040	0.054

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend. Joint hypothesis testing, based on the F-Statistic, confirms that the coefficients of *Legislative interventions* and *Legislative interventions_{t-2} × Title V Reform* are jointly never statistically different from zero at 5% level. The same test for *Legislative interventions* and *Legislative interventions_{t-2} × DSP Reform* confirms that the coefficients are never statistically different from zero at 5% level.

As reported in Table 6 and 7, the fact that the variable of interest Legislative *interventions* is not significant with a lag of one or two periods confirms the previous results that these interventions have been of a rectification type with immediate effects rather than being designed as structural reforms to tackle pre-existing regulatory weaknesses with more policy planned consequences for “assuring the efficient and equitable response of systems to future changes” (Berman, 1995: 27).

Local administrations seem to be left in a situation of independence and low control until a series of defaults emerge triggering some legislative intervention for fiscal adjustments, which thus looks like to be non-systematic but timely actions.

Regarding the control variables, previous findings with respect to the baseline specification of the model are confirmed.

5. Conclusion

This paper investigated the role of the Italian legislation on local administration defaults in driving the dynamics of the local financial distresses over the 1989-2018 period. Moreover, by considering different regulatory regimes, we distinguish the role of the legislative interventions that give greater autonomy to the local authorities compared to those that guarantee the coverage of the default by the Italian Government to seize risk sharing effects and potential opportunistic strategy by local actors. Furthermore, we were interested to investigate and distinguish the effects of the legislative interventions introduced in 2012, which can be considered as a milestone change as they set stricter budget constraints rules at all levels of governance, from the impact of the sovereign debt crisis. Finally, we tried to identify whether the legislative interventions were more likely to be designed as a rectification tool with immediate effects rather than a structural reform with delayed but potentially more planned policy consequences. Several control variables ranging from economic, financial and banking dimensions to the socio-political context suggested from the literature on local financial distresses have been included into the analysis to explain the propensity of local administrations to accumulate public debt and lead to the default declarations.

The main finding of our paper is that the legislative interventions have a positive significant immediate impact on the default declarations among local authorities. The positive impact is driven by the first regulatory regime incurred over the 1989-2001 period which had foreseen the government bail-out of the financial distressed municipalities to restore public finances. By considering the switching regulatory regime from 2002, when the Reform of Title V introduced the no bail-out clause, we find that local policymakers are no longer encouraged to accumulate debt and declare bankruptcy as their debt is no longer borne by the State. Furthermore, we found that from 2012, in correspondence of the sovereign debt crisis and of a new and more rigorous regulatory framework, municipalities experienced an increase in the local default declarations. Moreover, we found empirical evidence of a North-South divide in the local financial distress procedure which adds to the age-old question of the Mezzogiorno and calls for a further policy objective into the policy debate aimed for many years at resolving it.

Our last result, i.e. the fact that defaults immediately correspond to the introduction of a change in the law, confirms that the legislative interventions have been non-systematic but timely actions with such immediate effects and therefore the issue of local defaults still requires to be fully addressed with several costs for all levels of governance and the general public as well. The legislation is evolving and looks like a step back has been taken as confirmed by the recent Decree no. 34 of April 2019, labelled "*Decree Growth*", which introduced the compromise on Rome Capital city implying that part of the historical debt of the Capital will be borne by the Italian Government but the savings deriving from the renegotiation of the loans of the Capitoline administration will be used to meet the needs of other distressed municipalities.

The historical U-shaped dynamics of the phenomenon, as illustrated in Figure 1 and as confirmed by our results' estimates, seems to have favored periods in which the default was guaranteed by the State and where the distance between the local policy makers responsible for the default declarations and the guarantor was greater and therefore moral hazard behaviors probably prevailed. Conversely, when

later in 2002 the no bail-out clause was introduced, local authorities became more responsible and cautious in declaring default. It is worth noting that despite the possibility of opportunistic behaviour by policymakers, local governments appear to be at the receiving end of a heavy flow of regulations coming from the Central Government which makes their correct implementation more difficult. Therefore, there is the need to radically review the existing regulatory framework by thinking to a more structural reform but also by developing capacity building through the strengthening of the local technical assistance, which, together with injections of new high-skilled and trained staff, are key for the recovery and protection of the public budget. Among the major limitations of the analysis, there is certainly the fact that the default declarations were made by the municipalities so it would have been interesting to analyze the phenomenon at the municipal level but as a consequence of the lack of data for long time span this was not possible. Moreover, the behavioral component of policy makers who may have been more or less opportunistic with respect to the bankruptcy procedure is an intriguing element that cannot be controlled for unless formalized into a theoretical framework. This is left to future research as well as analyzing whether the default declarations of municipalities, from 2000 onwards for which data are available at municipal level, occurred along the Italian territory have played a role in explaining local growth.

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Appendix A: Description of the data

Table A1: Regulatory interventions on financial distress of municipalities

Legislation	Time	Principal characteristics
Law n. 144/1989	24 th April 1989	<ul style="list-style-type: none"> • Default declaration due to the insolvency situation; • Introduction of Recovery Plan; • Debt restructuring; • Bail-out by Central Government (current expenditure).
Law n. 68/1993	19 th March 1993	<ul style="list-style-type: none"> • Obligatory irrevocable default declaration; • Timing for the disruption procedure; • Introduction of liquidation committee; • Bail-out by Central Government (current expenditure and costs of restructuring borrowing).
Law n. 267/2000	18 th August 2000	<ul style="list-style-type: none"> • Title VIII Testo Unico Enti Locali (TUEL), Single legislative framework of financial distress procedure.
Law n. 3/2001	24 th October 2001	<ul style="list-style-type: none"> • Reform of Title V in Italian Constitution; • Financial autonomy of municipalities; • No bail-out by Central Government (except in periods of economic downturns).
Law n. 13/2002	22 nd February 2002	<ul style="list-style-type: none"> • Extraordinary financial recovery procedure.
Law n. 140/2004	28 th May 2004	<ul style="list-style-type: none"> • Total abolition of charges borne by the State for municipalities that declare bankruptcy after 2001.
Law n. 88/2005	31 st May 2005	<ul style="list-style-type: none"> • Extinction of special financial recovery procedure.
Law n. 149/2011	6 th September 2011	<ul style="list-style-type: none"> • Declaration of financial distress by the Extraordinary Commissioner; • Political responsibility of governors.
Law n. 243/2012	30 th January 2012	<ul style="list-style-type: none"> • Constitutional reform and balanced-budget principle; • New rules for the Domestic Stability Pact; • Non-negative primary budget balance; • Accountability of sub-national authorities.
Law n. 126/2014	10 th August 2014	<ul style="list-style-type: none"> • Harmonization of accounting systems and budget schemes of local authorities (supplementary and corrective provisions to law no. 118/2011).
Law n. 164/2016	12 nd August 2016	<ul style="list-style-type: none"> • Replacing the accrual basis accounting and cash basis accounting requirements with a single non-negative accrual basis accounting balance.

Table A2: Variable sources

Group	Variable	Source
	Financial distresses	Italian Ministry of the Interior; Italian Court of Audit; Ca' Foscari Foundation
	Legislative Interventions	Own elaboration on data of Italian Ministry of Justice
<i>Socio-economic variables</i>	GVA per workers	Cambridge Econometrics
	Employment T/NT	Italian National Institute of Statistics
	Bank agencies	Bank of Italy Database
	Trade openness	Italian National Institute of Statistics
<i>Political variables</i>	Elections	Own elaboration on data of Italian Ministry of the Interior
	Political ideology	Own elaboration on data of Italian Ministry of the Interior
	Political discontinuity	Own elaboration on data of Italian Ministry of the Interior

Table A3: Descriptive statistics

	Mean	St. Dev.	Min	Max
Legislative interventions	0.367	0.482	0	1
Title V Reform	0.372	0.483	0	1
DSP Reform	0.235	0.424	0	1
GVA per workers	57,699.5	7,613.5	36,516.9	82,796.7
Employment T/NT	0.616	0.183	0.291	1.300
Bank agencies	0.051	0.020	0.010	0.133
Trade openness	3,705.5	2,928.7	79.1	31,368.3
Elections	0.193	0.395	0	1
Political discontinuity	0.138	0.345	0	1
Political ideology	0.410	0.492	0	1

Appendix B: Robustness check

Table B1: Panel estimation results including only regimes

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.025*** (0.007)	0.015** (0.007)	1.045** (0.500)	1.107** (0.551)	0.021** (0.008)	1.083* (0.560)
Title V Reform	0.006 (0.005)	0.006 (0.005)	0.006* (0.004)	0.005 (0.003)	0.006 (0.005)	0.004 (0.004)
DSP Reform	0.030*** (0.011)	0.030*** (0.011)	0.020*** (0.007)	0.022*** (0.007)	0.028*** (0.011)	0.021*** (0.008)
log(GVA per workers)			-0.094** (0.045)	-0.104** (0.050)		-0.101** (0.051)
Employment T/NT				0.051 (0.060)		0.049 (0.060)
Bank agencies				0.331 (0.223)		0.386* (0.229)
Trade openness						-0.002 (0.005)
Dummy North		-0.0005*** (0.00000)	0.006* (0.003)	-0.021 (0.030)		-0.016 (0.036)
Dummy South		0.010*** (0.00000)	-0.010 (0.010)	0.001 (0.011)		-0.0001 (0.013)
Elections					-0.004* (0.002)	-0.004* (0.002)
Political discontinuity					0.002 (0.002)	0.002 (0.003)
Political ideology					0.006 (0.005)	0.006 (0.005)
Time trend	-0.002** (0.001)	-0.002** (0.001)	-0.001** (0.0005)	-0.001** (0.001)	-0.002** (0.001)	-0.001* (0.001)
Observations	2,899	2,899	2,804	2,782	2,899	2,755
R ²	0.080	0.080	0.087	0.089	0.081	0.091
Adjusted R ²	0.047	0.047	0.053	0.054	0.047	0.055

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend.

Table B2: Panel estimation results including only legislative interventions

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.014*** (0.004)	0.004 (0.004)	1.379** (0.556)	1.390** (0.622)	0.010* (0.005)	1.362** (0.626)
Legislative interventions	0.008** (0.004)	0.008** (0.004)	0.010*** (0.004)	0.010*** (0.004)	0.008** (0.003)	0.010*** (0.004)
log(GVA per workers)			-0.125** (0.050)	-0.130** (0.057)		-0.126** (0.057)
Employment T/NT				0.055 (0.061)		0.054 (0.061)
Bank agencies				0.124 (0.161)		0.170 (0.162)
Trade openness						-0.003 (0.005)
Dummy North		-0.0005*** (0.00000)	0.008** (0.003)	-0.020 (0.031)		-0.013 (0.036)
Dummy South		0.010*** (0.00000)	-0.017 (0.011)	-0.008 (0.012)		-0.011 (0.014)
Elections					-0.005** (0.002)	-0.004* (0.002)
Political discontinuity					0.002 (0.003)	0.002 (0.002)
Political ideology					0.006 (0.005)	0.005 (0.005)
Time trend	-0.0004 (0.0003)	-0.0004 (0.0003)	-0.0004* (0.0002)	-0.0002 (0.0004)	-0.0004 (0.0003)	-0.0001 (0.0004)
Observations	2,850	2,850	2,755	2,755	2,850	2,755
R ²	0.076	0.076	0.089	0.091	0.077	0.092
Adjusted R ²	0.044	0.044	0.056	0.057	0.044	0.056

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend.

Table B3: Panel estimation results excluding big municipalities

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.021*** (0.005)	0.011** (0.005)	0.881* (0.451)	0.901* (0.491)	0.018*** (0.006)	0.892* (0.501)
Legislative interventions	0.017** (0.008)	0.017** (0.008)	0.016** (0.008)	0.016** (0.008)	0.017** (0.008)	0.016** (0.008)
Legislative inter.× Title V Reform	-0.021** (0.010)	-0.021** (0.010)	-0.017** (0.009)	-0.017** (0.008)	-0.021** (0.010)	-0.017** (0.008)
Legislative inter.× DSP Reform	-0.020** (0.009)	-0.020** (0.009)	-0.016* (0.008)	-0.017** (0.008)	-0.020** (0.009)	-0.017* (0.009)
Title V Reform	0.016** (0.007)	0.016** (0.007)	0.012** (0.006)	0.011** (0.005)	0.016** (0.007)	0.010* (0.005)
DSP Reform	0.037*** (0.014)	0.037*** (0.014)	0.026*** (0.009)	0.026*** (0.010)	0.037*** (0.014)	0.026*** (0.010)
log(GVA per workers)			-0.080* (0.041)	-0.086* (0.045)		-0.086* (0.046)
Employment T/NT				0.065 (0.057)		0.064 (0.057)
Bank agencies				0.238 (0.166)		0.253* (0.150)
Trade openness						-0.0001 (0.004)
Dummy North		-0.0005*** (0.00001)	0.005* (0.003)	-0.028 (0.029)		-0.029 (0.035)
Dummy South		0.010*** (0.00001)	-0.007 (0.009)	0.005 (0.011)		0.005 (0.012)
Elections					-0.0004 (0.002)	-0.0005 (0.002)
Political discontinuity					0.001 (0.002)	0.001 (0.002)
Political ideology					0.003 (0.004)	0.003 (0.004)
Time trend	-0.002** (0.001)	-0.002** (0.001)	-0.001** (0.0005)	-0.001* (0.001)	-0.002** (0.001)	-0.001* (0.001)
Observations	2,850	2,850	2,755	2,755	2,850	2,755
R ²	0.110	0.110	0.116	0.120	0.111	0.121
Adjusted R ²	0.078	0.078	0.082	0.086	0.078	0.085

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend. Joint hypothesis testing, based on the F-Statistic, confirms that the coefficients of *Legislative interventions* and *Legislative interventions* × *Title V Reform* are jointly statistically different from zero at 5% level in all cases. The same test for *Legislative interventions* and *Legislative interventions* × *DSP Reform* confirms that the coefficients are always statistically different from zero at 5% level.

Table B4: Panel estimation results including only regimes – Southern Italy

	(1)	(2)	(3)	(4)	(5)
Constant	0.049*** (0.018)	2.640** (1.208)	2.408* (1.378)	0.042** (0.019)	2.445* (1.415)
Title V Reform	0.017 (0.012)	0.017* (0.010)	0.018 (0.012)	0.016 (0.012)	0.018 (0.013)
DSP Reform	0.074*** (0.028)	0.052*** (0.018)	0.049*** (0.017)	0.072*** (0.028)	0.050*** (0.018)
log(GVA per workers)		-0.241** (0.111)	-0.226* (0.125)		-0.231* (0.128)
Employment T/NT			0.132 (0.165)		0.121 (0.165)
Bank agencies			-0.237 (0.714)		-0.217 (0.709)
Trade openness					0.003 (0.007)
Elections				-0.007 (0.005)	-0.005 (0.005)
Political discontinuity				-0.0001 (0.007)	-0.004 (0.008)
Political ideology				0.016 (0.010)	0.015 (0.010)
Time trend	-0.004** (0.002)	-0.003** (0.001)	-0.002* (0.001)	-0.004** (0.002)	-0.003** (0.001)
Observations	1,069	1,035	1,013	1,069	986
R ²	0.079	0.094	0.097	0.083	0.100
Adjusted R ²	0.045	0.057	0.058	0.046	0.059

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend.

Table B5: Panel estimation results including only legislative interventions – Southern Italy

	(1)	(2)	(3)	(4)	(5)
Constant	0.022** (0.010)	3.499** (1.385)	2.937** (1.482)	0.015 (0.011)	2.926* (1.505)
Legislative interventions	0.021** (0.009)	0.025** (0.010)	0.025** (0.010)	0.020** (0.009)	0.024*** (0.009)
log(GVA per workers)		-0.323** (0.128)	-0.277** (0.135)		-0.276** (0.137)
Employment T/NT			0.145 (0.168)		0.135 (0.167)
Bank agencies			-0.602 (0.633)		-0.566 (0.614)
Trade openness					-0.0005 (0.007)
Elections				-0.012** (0.005)	-0.005 (0.004)
Political discontinuity				0.006 (0.007)	0.001 (0.007)
Political ideology				0.016 (0.011)	0.014 (0.010)
Time trend	-0.001 (0.001)	-0.001 (0.001)	-0.0001 (0.001)	-0.001* (0.001)	-0.0003 (0.001)
Observations	1,020	986	986	1,020	986
R ²	0.069	0.098	0.103	0.074	0.106
Adjusted R ²	0.036	0.064	0.067	0.038	0.066

Note: *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1. Clustered standard errors in parentheses. Model includes fixed effects, time trend.



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