How do governments cope with austerity? The roles of accounting in shaping governmental financial resilience

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Abstract

Purpose
Studies on how accounting is involved in financial crises and austerity are limited. The context of austerity provides an interesting opportunity to explore the role of accounting in shaping government financial resilience, i.e., the capacity of governments to cope with shocks affecting their financial conditions.

Design/methodology/approach
Based on a multiple-case analysis of eight Italian municipalities, this paper explores how accounting contributes to the government capacities which are used to anticipate and respond to shocks affecting public finances.

Findings
Municipalities cope with financial shocks differently; accounting can support self–regulation, and can affect internally-led or externally-led adaptation. Different combinations of anticipatory and coping capacities lead to different responses to shocks.

Practical implications
The findings can be useful for public managers, policymakers and oversight bodies for strengthening governmental financial resilience in the face of crises and austerity.

Originality/value
The results provide evidence of the conditions, contexts, processes under which accounting becomes a medium which can support both anticipation of and coping with financial shocks, supporting cuts in some cases, and resistance in the short run, or driving long-term changes intended to maintain public services as much intact as possible. This highlights the existence of different patterns of governmental financial resilience, and thus indicates ways of best preserving the service of the public interest.

Keywords: financial resilience; accounting; accounting roles; government; municipality; fiscal crisis; austerity.

1. Introduction

There has been a recent resurgence of interest in how governments, and organizations more generally, can enhance their responses to austerity, shocks, and economic crises (Hopwood, 2009; Van der Stede, 2011). Interestingly, in spite of claims that accounting research has much to learn from deeper observation of the functioning of accounting practices in contexts of crisis (Arnaboldi *et al.,* 2015; Miller and Power, 2013; Van der Stede, 2011), there is a surprising dearth of accounting research into reactions to the recent global financial crisis and austerity, especially in the public sector. (For notable exceptions, see Bracci *et al.,* 2015; Chabrak and Gendron, 2015; Hodges and Lapsley, 2016.)

In the face of the recent global financial crisis, austerity, and related financial shocks, the importance of governmental financial resilience, meaning the ability to face shocks affecting public finances, has been advocated by professional associations, such as CIMA-AICPA and CIPFA, and has been discussed at professional conferences. However, surprisingly, this has not yet been accompanied by a parallel scholarly elaboration on the concept and the factors affecting it, how accounting is implicated in sustaining or hampering governmental resilience, and the effect on the provision of public services in the short and long term.

In trying to address this gap, the present article explores the role of accounting in affecting governmental financial resilience during the global financial crisis and austerity. The global financial crisis and subsequent period of austerity are considered as the contexts in which governmental responses to financial shocks act on, and in turn are affected by, organizational capacities and accounting systems.

In accordance with its exploratory aim, this article presents a multiple case study analysis of Italian municipalities. The municipality level of government is particularly relevant because it has been significantly impacted by fiscal austerity in many countries, in particular since the start of the global financial crisis in 2008. The Italian public sector also represents an interesting case because it was severely affected by the economic downturn and Italy's sovereign debt crisis, resulting in its public debt to GDP ratio being one of the highest in the world (132.6% at the end of 2016, according to Eurostat, 2017).

The contribution of this paper is two-fold. First, it explores the different ways in which municipalities develop and deploy capacities in the struggle to be financially resilient, i.e., to cope with austerity and the recent crises. Second, it shows how accounting is involved in the ways in which municipalities try to maintain public services when coping with austerity. In so doing, this study not only deepens knowledge on how accounting helps anticipate shocks, but it also highlights how it contributes to coping with crises and, more specifically, how different ways of coping with crises are possible. The remainder of this paper is structured as follows. The next section reviews extant accounting literature on the role of accounting in financial crises and austerity, and reviews resilience literature as a basis for exploring the concept of financial resilience. The third section focuses on the methods used in this study. The fourth section describes the context of analysis, i.e. Italian municipalities and austerity, and the fifth section presents the results of the study. The sixth section discusses the results and the seventh section presents conclusions, also pointing to implications for practice and research.

2. Accounting, crises, and austerity

The recent economic and fiscal crises have rekindled attention to private and public sector organizations' capacities to respond to shocks and disturbances (Boin *et al.,* 2010; Meier and O'Toole, 2009). Since the 2008 global financial crisis, several studies have been published that enhance our understanding of how governments respond to crises and austerity. Such studies have generally provided detailed accounts of the actions taken by countries or single public sector organizations to cope with financial difficulties, describing either (general) policies and administrative responses (Asenova *et al.,* 2013; Kickert, 2012a; 2012b; 2012c; 2012d; 2013; Kickert and Ysa, 2014; Robbins and Lapsley, 2014) or organizational strategies adopted to cope with austerity (Cepiku *et al.,* 2016; Overmans and Noordegraaf, 2014; Raudla *et al.,* 2015; Scorsone and Plerhoples, 2010; West and Condrey, 2011). Such studies, however, do not generally look at how accounting is implicated in such processes. Indeed, accounting scholars, with a few notable exceptions, so far appear to have devoted limited attention to the role of accounting in responding to crises and austerity, especially in the public sector (Bracci *et al.,* 2015). These exceptions are primarily represented by the contributions published within the special issues "The Global Financial Crisis" (Chabrak and Gendron, 2015 – not specifically focused on the public sector), "Public sector accounting and accountability in an era of austerity: new directions, challenges and deficits" (Bracci *et al.,* 2015), and "A private sector failure, a public sector crisis - Reflections on Great Recession" (Hodges and Lapsley, 2016). A further contribution is that of Johansson and Siverbo (2014), which found that, in response to budget turbulence, public sector organizations use tight budgetary control to constrain budgets and budgeting behavior. However, this paper did not refer specifically to the global financial crisis and the related austerity measures.

The journal special issues listed above, in particular, are central in assessing the status of current accounting research on the role of accounting in addressing situations of crisis and austerity. As Chabrak and Gendron (2015: p. 5) highlight, "accounting and auditing technologies, as well as their underlying discourses, influenced field dynamics surrounding the [2008 global financial] crisis, both before and after its emergence". Several studies point out that accounting contributed to the crisis ("culpability of accounting") due to its role in perpetuating the financial-economic rationales and neo-liberal principles that contributed to the crisis (Cooper, 2015; Gårseth-Nesbakk and Kjærland, 2016; Richard, 2015), even after the 2007/08 Great Recession (Hodges and Lapsley, 2016), and in supporting inequitable distribution of income and wealth (Sikka, 2015). Yet other studies have shown how accounting is implicated, as a consequence of the crisis, in the processes of finding solutions and absorbing the effect of or struggling with austerity, at different levels and viewed from different perspectives. For example, Gendron and Smith-Lacroix (2015) reflect on how the global financial crisis has brought about calls for substantive change in the political economy, leading to the need to deepen knowledge on alternative paradigms in finance practice and research. Heald and Hodges (2015) and Lapsley *et al.* (2015) highlight how the EU and supranational institutions tend to increase their surveillance power in conditions of austerity, with (financial reporting and statistical) accounting serving a role in justifying retrenchment policies. At the same time, national governments are involved in accounting arbitrage and manipulation (in terms of deployment of off-balance sheet mechanisms) and in planning and reporting for financial goals in terms of retrenchment and debt consolidation. As such, the recent crisis and austerity measures appear to have brought about greater reliance on the constraining aspects of accounting (see also Van der Kolk *et al.,* 2015), a stronger attention to accountability to external stakeholders (e.g., Ferry and Ahrens, 2015), as well as increased scope for seeking to attribute blame, and "bricolage" approaches (see also Barbera *et al.,* 2016; Gårseth-Nesbakk and Kjærland, 2016), i.e. short-term and façade solutions aimed at temporarily balancing the budget on a day-by-day basis. Thus, different possible roles emerge for accounting in the contexts of austerity and crises, although these are often examined in studies that focus primarily on different aspects of the conditions of austerity and crises.

While not looking at the context of recent crises and austerity, Ezzamel and Bourn's (1990) contribution on the roles of accounting information systems in an organization experiencing financial crisis is among the few (to the best of our knowledge) studies that comprehensively address how accounting intervenes in anticipating and in coping with shocks. The study examines the periods both before and after a crisis period. Based on earlier studies of Earl and Hopwood (1980) and Burchell *et al.* (1980), and looking at the context of a university, Ezzamel and Bourn (1990) propose that accounting systems should act as *answer and learning machines* during the "pre-crisis period", because they can support anticipation and prevention of crises by helping to scan the environment and gathering early warning indicators. During "real time-crisis management", accounting systems can play an important role in facilitating crisis management, enhancing "organizational abilities to buffer the impact of crises and to cope effectively with them" (Smart *et al.,* 1978, quoted in Ezzamel and Bourn, 1990: p. 400), thereby acting as *idea and dialogue machines*. During the "post-crisis period", accounting systems should again take on the role of *answer and learning machines*, due to the organizations' need to enhance their surveillance and planning capabilities, and thus their capacity to better respond to future shocks. However, Ezzamel and Bourn's analysis of a UK-based university facing new financial constraints finds that accounting systems "lacked some of the requisite mechanisms for proactive crisis management" (Ezzamel and Bourn, 1990: p. 422). Their study highlights that, in the face of increased uncertainty, during the onset of the crisis, the accounting system continued to operate as an answer machine or to justify decisions that had been taken in the past.

In summarizing the above literature, it could be concluded that one group of studies have provided evidence of accounting's "culpability" in being among the factors which brought about the crisis, or at least worsened or failed to prevent it. Another group of studies have shed new light on how the crises and austerity have shaped accounting systems, often focusing on single aspects of, or single effects on, such systems. A third group, which is less focused on accounting, describes specific responses adopted by an organization to face crises (for example, cutback management and contracting out). Thus far, little attention has been devoted to the development of a comprehensive and dynamic view of how (public sector) organizations deploy and develop the capacities that underlie the responses necessary to cope with difficult economic conditions, how this brings about differentiated responses, and what roles accounting plays in such processes. More specifically, while most studies tend to focus on a specific role of accounting under austerity, Ezzamel and Bourn (1990) remind us that such roles may be multifaceted, and may change over time. However, their focus on a single study does not allow exploration of the diversity of roles across different contextual and organizational circumstances. The present paper aims to address these gaps by exploring how organizational capacities shape responses to financial shocks and austerity, and how accounting is shaped by, and contributes to shape, such capacities.

The topic is of considerable relevance, particularly for the public sector, and especially for municipalities (i.e., the level of government closest to the citizens) that provide tangible services to the community, and thus directly impact the quality of life of beneficiaries. The recent financial shocks have emphasized the importance of governments' ability to tackle resource retrenchment, as citizens' needs tend to be higher in times of crises (as the last economic crisis has shown, effects on citizens include job losses and higher needs for social services and housing) (Barbera *et al.,* 2017). This tension between potential demand and actual ability to meet public needs is particularly critical as it may reduce the public support enjoyed by the politicians in power, which is needed when financial cutbacks and service reductions are to be decided upon and approved.

In examining how organizational capacities shape responses to financial shocks and austerity, and how accounting is shaped by, and contributes to shape, such capacities, we rely on the concept of resilience (Barbera *et al.,* 2017; Steccolini *et al.,* 2017), which provides a conceptual framework to understand the organizational capacities needed and deployed in circumstances of crises. Resilience can be defined as both a capability for reaction to crises, 'bouncing back' to an original state and thus absorbing disturbances by undergoing first-order change[1] (Boin *et al.*, 2010: p. 8; Linnenluecke, 2017: p. 6; Meyer, 1982), and as the capacity to anticipate and cope with the unexpected, progressing through the development of new capabilities and the creation of new opportunities, and thus undergoing second-order change[2] (Meyer, 1982; Somers, 2009). While some authors (Wildavsky, 1988; Wukich, 2013) define resilience as the "capacity to cope with unanticipated dangers after they have become manifest" (Wildavsky, 1988: p. 88), others highlight that resilience requires anticipation and awareness of risks (Lengnick-Hall and Beck, 2005; Linnenluecke and Griffith, 2013; Somers, 2009). A wider definition of resilience (Boin *et al.,* 2010) will encompass the abilities to prevent, to anticipate, and to recover from shocks and crises. This suggests that resilient behaviors and capacities are deployed before, during, and after the occurrence of crises and shocks. Specifically, in order to anticipate shocks, resilient organizations are aware of the external environment (McManus *et al.,* 2007), develop capacities to read signals that indicate shocks (Boin and Van Eeten, 2013), and engage in risk mitigation activities (Linnenluecke and Griffiths, 2013). To cope with shocks, organizations may rely on interactions among organizational actors (Weick, 1993) and interorganizational actors (Linnenluecke and Griffiths, 2013; Skertich *et al.,* 2013), information sharing (Hood, 1991; McManus *et al.,* 2007; Skertich *et al.,* 2013; Sutcliffe and Vogus, 2003), effective communication (Kendra and

Wachtendorf, 2003), decentralized decision-making (Boin and Van Eeten, 2013), and loosening of control (Sutcliffe and Vogus, 2003). Slack resources are found to help in absorbing the impacts of shocks (Hood, 1991; Meyer, 1982; Sutcliffe and Vogus, 2003). Similarly, questioning the status quo (Weick, 1993) and learning (Skertich *et al.,* 2013; Wildavsky, 1988) improve adaptability.

A useful conceptualization and operationalization based on the above mentioned contributions, and specifically focused on "financial" resilience, i.e., capacity to deal with shocks affecting finances, is provided by Barbera et al. (2017). The authors develop a framework in which four main dimensions of financial resilience are identified. These are environmental conditions, perceived vulnerability, and two main categories of internal capacities for facing with shocks: anticipatory capacities, and coping capacities. Anticipatory capacities are defined as "the availability of tools and capabilities that enable [local governments] to better identify and manage their vulnerabilities and recognize potential financial shocks before they arise" (p. 675), and include planning, controlling, and monitoring systems, as well as situation awareness, and sense-making. Coping capacities refer to "resources and abilities that allow shocks to be faced and vulnerabilities to be managed" (p. 675). These capacities may play different roles: they may allow the organization to buffer (i.e., absorb) the impacts of shocks without changes in extant structures and functions (e.g., the use of financial reserves, spending cuts, or deferring investment expenditure); to adapt through the implementation of incremental changes (e.g., enhancing internal competencies, entering partnerships with private developers, or increasing networking with external stakeholders to support service provision); or even to transform extant structures, functions, goals, and values through radical changes (e.g., identifying alternative income sources, achieving autonomy, or achieving financial self-sufficiency). The study by Barbera *et al.* (2017) highlights that, by relying too much on buffering capacities, organizations tend to 'bounce back', or maintain a status quo, rather than develop the capacities needed to change and progress. This contributes to higher vulnerability, i.e., reduced capacity to cope with emerging shocks. Building on this conceptualization, and thus using a resilience perspective, can contribute to a better understanding of the capacities underlying governmental responses to difficulties and shocks, and their dynamics. Moreover, it allows a deeper exploration of how accounting is implicated in nurturing, hampering, or enabling such capacities and responses. However, no extant study exists which examines the role of accounting in shaping financial resilience. The present paper contributes to the addressing of this gap.

3. Methods

Consistent with the exploratory aim of this paper, eight in-depth case studies (Eisenhardt, 1989; Yin, 2009) were conducted to explore governmental financial resilience. To compare entities operating in similar institutional settings, the analysis was focused on Italian municipalities that are province capital cities (117 out of 8,047 municipalities). The eight selected municipalities were identified by ensuring coverage of cases with different financial conditions (Eisenhardt, 1989) and coming from different geographical areas, as the North/South divide has been already been identified as relevant in the Italian context (Anessi-Pessina *et al.,* 2008; Putnam, 1993). To evaluate financial conditions, two key variables were identified, i.e., the average municipal budgetary position and its volatility over the ten-years 2000-2009. The budgetary position (the year-end surplus or deficit) is considered the primary financial performance measure used at the municipal level in Italy, and it is calculated as follows:

Deficit or surplus = cash + revenues to be recovered − commitments to be paid.

While budgets are generally required to balance, there is not a universally agreed-upon optimal budgetary position at the end of the fiscal year. However, there is an expectation that neither deficits nor surpluses should exceed certain thresholds (Hendrick 2006; Rose and Smith, 2011). The ratio of deficit or surplus to operating revenue is considered acceptable within a −3% to +5% range, and this is taken to indicate a 'balanced budget' (Barbera *et al*., 2016). The measure was normalized to the total operating revenues of municipalities studied. To ensure a balanced representation of different financial conditions, combinations of high and low average budgetary position and volatility were identified, and additionally, for each combination, one municipality from the North and one from the South of Italy were chosen. As a consequence, two municipalities with both low average budgetary position and low volatility were identified (Modena and Salerno), two with low average budgetary position and high volatility (Caserta and Forlì), two with high average budgetary position and low volatility (Napoli and Varese), and two with both high average budgetary position and high volatility. Table 1 shows the selected municipalities, their relevant financial information, and their geographical areas.

[Table 1 here]

Because this study seeks to understand how accounting contributes to public sector organizations' efforts in maintaining operations after shocks, the 2000-2009 ten-year period was purposively identified in order to capture financial data encompassing an adequate period of time before the shocks occurred. The interviews and the results section of this paper also considers events taking place after 2009, up to 2013, in order to highlight what happened in the years after the crisis, based on data available at the time this research was performed. Indeed, past research on Italian municipalities affected by shocks has emphasized that in 2009 these local governments were affected by the first consequences of the economic and financial crisis, with larger impacts to come in the following years (Cepiku *et al*., 2016; Guarini and Pattaro, 2016). The present study, drawing on Ezzamel and Bourn's (1990) observation that accounting appears to assume the same role during both the pre- and post-crisis phases, and recognizing that it may be difficult to clearly separate the events and effects taking place during and after the crisis, identifies and considers only two main time periods: the period before the onset of a crisis and the post-crisis period[3]. This allows the study to consider how accounting contributes to both anticipating and coping with crises and austerity, before and after their manifestation. This is consistent with the "wider" conception of resilience within the literature advocated by Boin *et al.* (2010), and highlights the dynamic nature of resilience, which, rather than being observed at a specific point in time, develops over time. In contrast to past accounting research (e.g., Johansson and Siverbo, 2014), our analysis jointly and collectively considers anticipation and coping behaviors, and different types of accounting practices, from planning and control to slack, and more creative practices.

The selected cases were studied by analysis of relevant documents and financial data and by face-to-face semi-structured interviews (Bailey, 2007) with key informants such as chief financial officers (CFOs) and chief executive officers (CEOs)/general secretaries. The reason why these roles were identified is that individuals in these roles are actively involved with, and thus affect, the budgeting processes used by municipalities, and could help to retrospectively construct a model of the main accounting mechanisms and events, and the relationships between accounting tools and the responses to shocks within each municipality. For Barletta and Lodi we were able to conduct interviews only with CFOs. For all other municipalities, we were able to conduct interviews with both the CFO and the CEO/general secretary. This means that a total of 14 interviews were conducted between October 2012 and February 2013. Each interview lasted between 45 and 90 minutes and was recorded and transcribed. Transcripts were returned to the interviewees for corrections and additional comments. For each interviewee, the following topics were addressed: their perceptions about the financial health of the municipality, the municipality's main financial and non-financial goals and strategies, the main shocks suffered over the ten year period studied, the kinds of responses that were made, and the factors affecting the organizational capacity to respond to shocks (with a specific focus on accounting mechanisms and tools). Given the limits of individuals' memories, during the interviews we asked people to consider and describe their perceptions of the shocks and experiences as they occurred over the whole time period of the study. It is recognized that the reconstruction of events will also reflect interviewees' *ex post* rationalizations (Patton, 2002). Because the study aims to investigate unexpected events which underwent successive developments and to identify approaches to resilience, which are manifested in exceptional circumstances like shocks (Linnenluecke, 2017), an *ex post* approach appears to be the most suitable method of investigation.

Triangulation of data sources (primarily through financial data, audit reports, and media reports) was used to validate the information collected in the interviews (Bailey, 2007). Financial data were downloaded from the Aida PA - Bureau van Dijk database that contains economic and financial information on Italian local governments, including municipalities, based on the year-end reports which are published each year on the Italian Ministry of Interior website. Our elaboration of the selected municipalities, and specifically information on the average budgetary position and volatility over the selected period, were shown to interviewees after conducting each interview, in order not to affect the responses to the interviewees. This allowed us to obtain confirmation and further explanations of the dynamic of the financial condition over the identified time period, the underlying financial goals and strategies of the municipality, as well as the accounting mechanisms and tools adopted also in response to shocks. Media and audit reports (such as those published by Corte dei Conti, the supreme Italian audit institution), were also particularly useful to reconstruct key events relating to governmental laws and requirements and their overall impact on municipalities. In particular, media were useful to deepen our knowledge about those municipalities that had received high levels of media attention and debate in the past due to their particular situations, such as Caserta and Napoli, that had undergone default. Again, this proved to be useful to triangulate information emerging from financial data and interviews.

By means of a manual coding process, the researchers classified the main themes emerging from the interviews. The main themes identified were triangulated with empirical data and with extant literature (Eisenhardt, 1989) and, through an iterative process, the final operationalization of resilience and its inherent accounting practices were identified. Examples are provided through interview quotations (see Appendix 1).

4. Italian municipalities and austerity

This section provides a short background to the subsequent analysis of the findings by presenting the main features of the Italian municipal context. Italian municipalities, together with provinces, represent the local level of government in Italy (the other levels being the central and the regional levels). Municipalities are in charge of all administrative functions concerning their local community, such as social services, public transportation, waste collection, street lighting, road maintenance, and services related to land use and economic development. Within specific legal ceilings set at the national level, they raise income from local taxes (property tax represents the major source of revenue for Italian municipalities) and fees for the services they provide. Italian municipalities' average ratio of own-revenue to total current revenue (which includes funding from the central government and other sources)[4] was 61% in 2013 (ANCI, 2015). However, municipalities lack any real power to regulate the most important aspects of taxes, such as tax bases and rates, which are set by the central government

(Corte dei Conti, 2015). The average per capita expenditure of Italian municipalities in 2013 was 995 Euros, of which 773 Euros related to current expenditure and 222 Euros related to capital expenditure (ANCI, 2015).

After the 2008 economic and financial crisis, centrally defined fiscal policies affecting municipal finances were changed repeatedly, due to the declared need for the central government to restore Italian public finances and reduce the public debt. In particular, municipalities suffered from cutbacks in the amounts of funding transfers from the central government and reduced autonomy over local taxes. Moreover, a series of austerity measures were taken, with fiscal and budgetary constraints being enacted at the local level. Also, since 2012, municipalities have been subject to significant delays in central government decisions over the amounts of funding transfers, which has increased the complexity of budgetary processes and the approval of balanced budgets. The revenue shortfall due to the wider economic downturn, a socio-economic context characterized by large-scale job losses[5] and a crisis in the housing market[6], further contributed to compounding the challenges arising from increased demand from citizens and the need to maintain a capacity to provide services and make investments under shrinking resources.

Another major constraint was related to the Italian Domestic Stability Pact (DSP), which was introduced in 1999 to involve local governments in the effort to reduce the national deficit and comply with EU fiscal rules. Under the DSP, each financial year municipalities are required to achieve specific fiscal targets, in terms of expenditure cutbacks or increases in cash surpluses (see also Barbera *et al.,* 2016). The DSP's requirements were made more stringent following the financial crisis. According to Corte dei Conti (2015), the Italian central government used these policies to increase its fiscal surveillance over local governments, who lost virtually all of their fiscal autonomy.

5. Findings: accounting practices before and after the crisis

The triangulation between interviews and the relevant literature allows this study to identify different approaches taken by municipalities in anticipating and coping with austerity. For each approach, partially differing roles of accounting emerge. The following subsections illustrate the different types of financial resilience behaviors (including self-regulation, and internally- and externally-led adaptation), and how accounting contributed to anticipate and cope with austerity within each group of municipalities. Table 2 summarizes the roles of accounting that allow organizations to anticipate and cope with shocks, possible municipal responses, as well as their financial performance.

[Table 2 here]

5.1 Accounting contributing to self-regulation

In Modena and Salerno, long-term planning and control, characteristic of the two municipalities before the shocks, appeared to be essential in affecting the municipalities' responses to the crisis, providing both organizations with the capacity to anticipate events. For Modena, the interviewees emphasized the importance of supporting planning by performing simulations to forecast and estimate future revenues and expenditures, as well as to identify possible areas of risk.

> We do simulations based on the limited data we have, in order to keep the budget manageable. (Modena, CFO.)

In Salerno, early budgetary approval was described as a relevant accounting practice, in a context where budgetary approval was often and repeatedly postponed by legislation. The timing of budgetary approval is relevant to the capacity to forecast and to prompt decision-making:

> One of the points that [our Mayor] has always paid attention to […] is to approve the budget by 31st December. On January 1st we must start to implement our programs, and this relies on the budget to be approved on time. (Salerno, CFO.)

In terms of control, the capacity for anticipation relies on continuous monitoring during the year of revenues collected, expenditures, and the quantity and quality of services provided:

> We try to make good predictions, […] through careful monitoring. The budget is not written once and for all but is constantly reviewed during the year. (Modena, CEO.)

The described accounting practices still characterized the two municipalities during and following the crisis, contributing to maintain a high capacity to anticipate shocks. This allowed the minimization of the impact of cutbacks on provision of services by facilitating the use of available resources. Data show that operating expenditure decreased by 4% in Modena and increased by around 3% in Salerno, while capital expenditure decreased dramatically in Modena (-54%) and at a lower rate in Salerno (-9%; see Appendix 2a, c). A more in-depth analysis of operating expenditure and related changes after 2008 shows that, in both municipalities, the overall variation between 2008 and 2012 does not appear to be particularly large, but examining expenditure on specific service areas, it becomes evident that major cuts affected operating expenditure for culture (-12% in Modena; -13.70% in Salerno), education (-5.60% in Modena; -10% in Salerno), youth, sport and leisure (-14% in Modena), and local police (-5.7% in Salerno). Both Modena and Salerno increased networking and partnerships with external stakeholders and providers of services. Specifically, in Salerno, collaboration with private enterprises and the creation of public-private partnerships (PPPs) were strongly encouraged to finance investments, as PPPs were not counted in the fiscal balance. More generally, the attraction of external resources was considered a major strength by interviewees, both before and after the shocks.

> In our municipality, we have strongly considered investments to create job opportunities and boost the economy. One of the alternatives we found is to access private capital: we have mixed-finance projects, also of considerable magnitude. (…) For example, we use project finance initiatives. A photovoltaic park has been built on 40 hectares of land: the leasehold has been transferred to private individuals who pay a royalty (about 1,200,000 Euro a year) and the repayment of the investment is based on the revenues that the Municipality runs with the sale of energy and the contribution to energy production. Private businesses also create public works that are transferred under the ownership of the Municipality (e.g., restructuring, the creation of an educational center). (Salerno, CFO.)

In Modena, the interviewees pointed out that the decline in financial resources gave rise to higher inclusion of associations and citizens' representatives in order to better prioritize services, particularly in social services. This led to at least 100 local associations taking part in the discussion and approval of a three-year social plan and the related allocation of resources.

The plan is to be revised or confirmed every year, based on emerging needs and available resources. According to the interviewees, this helped the municipality to better allocate budgetary resources based on citizens' needs, and at the same time represented a way for politicians to raise public consensus on difficult decisions. In this perspective, in a context of fiscal retrenchment, accounting was instrumental to the adoption of inclusive solutions in budget decisions.

> The municipality of Modena developed with the aim to provide responses to citizens' needs. It interprets its budgetary policies as a means to provide services to citizens. (Modena, CFO.)

Shared decision-making was also considered important for *strengthening internal collaboration and cohesion*, which included improving internal communication and information flow.

> There are regular meetings among the different directors of the Departments […], then there are almost daily discussions with the Financial Department on how resources should be used. […] Each Department […] must align its strategy to the overall Municipal strategy. (Modena, CFO.)

> The budget formulation is a shared process. In the first stage, budget proposals from departments are collected, then a final meeting is held to take into consideration the Mayor's strategy and the financial sustainability of proposals... The Mayor has a strong team. (Salerno, CFO.)

In addition, Modena's accounting practices were characterized by a prudent approach to expenditure forecasting, allowing the Municipality, both before and after the shocks, to better cope with unexpected events due to the creation of budgetary reserves (i.e., when forecasting future expenditure, a certain amount of resources were not allocated towards specific items of expenditure, and became available only if unexpected expenditures arose, giving a buffer to help avoid financial imbalances).

According to the interviewees, reliance on a combination of actions allowed Modena and Salerno to be able to self-regulate (in a timely manner) their responses to shocks. These responses predominantly consisted of selectively reducing expenditure (i.e., no across the board cuts and maintaining funding for priority needs), increasing control over subsidiaries, increasing revenues, and the continuous adoption of virtuous behaviors (e.g., ensuring balanced budgets, a high rate of revenue collection). For example, between 2008 and 2012, expenditure on personnel decreased by almost 15% in Modena and 18% in Salerno, and expenditure on equipment decreased by 15% and 7%, respectively. In the same period, revenues (specifically from taxes) almost doubled in Modena and more than doubled in Salerno, also due to efforts to combat tax evasion.

> We are now self-regulating in terms of personnel management: we are blocking turnover far more than the law requires, we avoid replacing turnover of positions that are not essential for guaranteeing the survival of fundamental services. (Modena, CEO.)

> We also implemented actions to fight against tax evasion, this is something we have been taking for many years and which we have certainly increased, in particular, the recovery of local taxes (e.g., property tax, the tax for the occupation of spaces and public areas, the advertising tax, fare evasion)… (Modena, CFO.)

> We have been trying to recover structural revenues to meet the Municipality commitments. We are working a lot on tax evasion […], we revised the tax rates of the local property tax to increase revenues. (Salerno, CFO.)

In these cases, accounting tools represented a medium for anticipation, playing an early-warning role and allowing the situation to be kept constantly under control. The mix of solutions identified led to a reduction of operating expenditures in some services (as mentioned above, mainly in culture and education). However, social services did not show substantial modification (+3.70% in Modena, +1.60% in Salerno), although these data should be read in the light of the increasing needs brought about by the economic crisis. Overall, the efforts made by these two municipalities were driven by the desire to maintain past levels of services:

> In this difficult situation, we are trying to understand what we should do with some services […] how can we achieve budgetary goals while maintaining the current level of services, in a context of increasing demand for services (particularly, social services) and a dramatic decrease of resources. (Modena, CEO.)

5.2 Accounting contributing to internally-led adaptation

Some of the municipalities we analyzed highlighted stronger difficulties in managing the crisis, but also appeared to have embarked on a path of internally-led adaptation (Barletta, Forlì, Lodi, and Varese). Before the crisis, most of these municipalities adopted a 'day-by-day' management facilitated by accounting tools and mechanisms used to increase budget flexibility (Barletta, Forlì, and Lodi).

Barletta, Lodi, and Varese described a context before the crisis characterized by the absence or the limited development of management control systems.

> We do not have [...] an office for management control; however, we will have to create it as a result of the new Decree. The problem is staff availability. (Lodi, CFO.)

According to the interviewees, the above-mentioned shortcomings in planning and control practices hampered their municipalities' capacities to anticipate shocks, bringing about a focus on reacting ex post to shocks, rather than adopting actions to avoid their possible negative consequences in advance.

When the crisis and related shocks struck municipalities, this lack of anticipatory capacities, combined with centrally imposed cuts and constraints on local revenues (as described above), generally led to important impacts on the development of public expenditure (see Appendix 2a,b,c). Operating expenditure trends between 2008 and 2012 remained stable only in Forlì (+0.40%), increased in Barletta (+5%) and Varese (+18%), but decreased in Lodi (-7%). Capital expenditure, during the same period, decreased in the four municipalities (around 64% in Varese, 70% in Barletta, 73% in Lodi, and 76% in Forlì). A deeper examination of the impact on services shows that major cuts for operating expenditure, between 2008 and 2012, were made to culture (Varese, Forlì), education (-2.47% in Barletta), youth, and sport and leisure (all municipalities). In Lodi, major cuts were made also for social services (-13%). Varese even created a spending review unit to reduce expenditure.

Interestingly, in all the municipalities, improvements in planning and control mechanisms started to take place following the financial crisis, although at different times and in different ways. In particular, in Varese goal setting and evaluation started to be developed after 2012:

> We did not have, in the past, a sound management control system. […] We are changing our performance evaluation system […] to assess each manager on a few strategic goals. (Varese, General Secretary.)

In Barletta (after 2013), Forlì (after 2008), and Lodi (after 2011), management control systems were put in place to improve revenue collection. Barletta also strengthened cross-unit collaboration. From examination of revenue data, it can be observed that this led to some improvements in Forlì, with the collection rate for taxes increasing from 69.5% to 82.5% between 2008 and 2009, and to 93% in 2012, and the collection rate for revenue from service fees increasing from around 51% to 67% between 2008 and 2012. Between 2008 and 2012, in Lodi, the collection rate for taxes increased from 65% to 83%. Data available for Barletta, however, do not show similar improvements. In managing capital revenue, Forlì resorted to equity divestment.

> (We resorted) to asset and equity disposal. (Forlì, CEO.)

Coping with unexpected events required municipalities to rely on different accounting practices, and sometimes to resort to opportunistic behaviors. In some cases, financial slack resources (i.e., reserves available in the budget, often contributing to the surplus) were important in enabling the absorption of shocks (Barletta, Varese), although in certain cases such reserves were the result of opportunistic exploitation of accounting policies, rather than of behaviors aimed primarily at setting aside financial resources. Indeed, some municipalities relied on opportunistic behaviors (or "bricolage", see also Weick, 1993) based on capturing emerging solutions aimed at balancing the budget on a day-by-day basis (Barletta, Lodi), or on networking and partnerships with external stakeholders and providers of services (Forlì). In contrast, reliance on external funding (i.e., use of resources as they become available, Forlì) resulted in a limited capacity to cope with emerging difficulties. These practices are discussed further below.

The creation and use of reserves was particularly intense in Barletta and Varese. This practice consisted of the creation of budgetary surpluses through the overestimation of revenues (e.g., from fines, waste tax), allowing higher spending flexibility. Surplus, as calculated in the commitment-based budgetary system in use in Italian municipalities (before the country's 2011 accounting reform), includes not only cash, but also revenues to be collected and expenditure to be paid. The use of the accumulated surplus allowed spending and provision of services to citizens during financially difficult times. However, this represented a risky behavior that resulted in the collection of very low levels of actual revenues compared to the estimated amounts, indicating that the surplus was overestimated and leading to very large deficits.

> Every year we certainly tend to drag on past situations (with respect to revenues to be collected). The law specifies that each municipality must certify the need to maintain in the budgetary position either the revenues to be collected or the expenditures to be paid, for which we hope to "tidy up our budget" based on this assessment. The problem, which is common to many other municipalities, is how to revise and eventually reduce the amount of these revenues to be collected according to the real chance to get cash inflows. The common problem for all municipalities is that basically, no one takes the responsibility to cancel these amounts (and rebalance the budget), it is easier to maintain them in... (Varese, CFO.)

> Actually, we act on our revenues to be recovered (Varese, General Secretary.)

After the crisis, reliance on the use of such "reserves" remained in place in Varese. In contrast, it became increasingly unsustainable in Barletta.

> […] the surplus is affected by important amounts of capital revenues to be recovered due to pending legal disputes and for […] the lack of recovery of taxes on building permits due to the crisis. (Barletta, CFO.)

Before and after the shocks, Barletta and Lodi were characterized by opportunistic behaviors, based on the continuous identification of new solutions to address emerging problems, with the tendency of the latter municipality to face little disturbances that arose year by year:

> […] there is no medium-term planning but, conversely, we play it by ear. […] priority is given to catching opportunities to obtain immediate advantages within the political mandate. (Barletta, CFO.)

> In recent years, we tried to live year by year not to say almost day by day. (Lodi, CFO.)

In Barletta, this opportunistic behavior included the use of an important receivable balance of 45 million Euros, a very large government transfer receivable that was carried over in the accumulated budget surplus for many years and used to create flexibility in spending decisions.

In Lodi, this opportunistic approach translated into increasing their reported surplus by means of a one-off financial transaction with a subsidiary company in 2008 that created additional budgetary leeway (exploiting the fact that consolidation of accounts for budgetary purposes was not mandatory at that time):

> What determines recent years' surpluses is the presence of a very large surplus, which is around €10 million, established in 2008. It comes from a granting credit made to a subsidiary for the purchase of some municipal buildings. [This subsidiary had insufficient liquidity to meet the liability created.] It returned 2 million in 2010 (out of 12 million to be recovered). (Lodi, CFO.)

Behaviors based on the opportunistic exploitation of accounting rules and practices allowed municipalities to ensure the provision of services, which also affects political consensus, according to the interviewees.

Similar to the cases of Modena and Salerno, networking with external stakeholders was identified by Forlì as essential for responding to external shocks and the creation of PPPs was considered a 'new' solution to finance investments without impacting the fiscal deficit.

As illustrated above, in all these cases, in contrast to Modena and Salerno, accounting represented mainly a means of adaptation, i.e., a tool for enhancing budgetary flexibility, substantially relying on coping behaviors rather than on the ability to anticipate shocks through the creation of strong planning and control mechanisms. What all the interviewees agreed on was that the solutions identified were generally aimed at maintaining the municipalities' service levels, and thus responding to citizens' needs for public services:

> The municipality tries to keep fiscal pressure low while following the citizens' needs. (Barletta, CFO.)

> What do we first cut? In the case of a lack of resources, new public works are postponed. We try to maintain at least the operations (e.g., schools). (Forlì, CEO.)

> Regarding operating expenditure, Lodi may only now make hard choices. We have already cut, in the last 2-3 years, contributions to local associations, we tried to reduce supplies, we constantly monitor phone expenditure and thanks to a tender for electricity supply, we reduced our expenditure. We try to cut everything, but at the core, there is expenditure for services […] the only thing we can do now is to not provide any more certain services. (Lodi, CFO.)

> We are trying to identify new solutions to the problem of professional positions that we are going to lose […] at the same time we are trying to maintain the same level of services, but this is not easy. (Varese, General Secretary.)

To maintain a certain quantity and quality of public services, while adapting to shocks, Barletta, Forlì, Lodi, and Varese demonstrated a proactive, or internally-led, approach. Compared to Modena and Salerno, in this second group of municipalities accounting did not support high anticipatory capacities before shocks; indeed, this group of municipalities was characterized by weak planning and control processes. However, efforts were made after the shocks to strengthen the internal anticipatory capacities. In these municipalities, coping capacities, although offhand and based mainly on creative and opportunistic behaviors, appeared to be effective substitutes for dealing with shocks. These behaviors did not appear to be aimed at building the internal conditions for the prudent management of resources. On the contrary, they were mainly inspired by a short-term focus on finding solutions to face emerging needs. However, even in municipalities where coping capacities were not particularly developed, such as in Forlì, improvements were made to enhance resource collection or attraction. More generally, accounting mechanisms contributed inventively to allow these municipalities to cope with shocks.

5.3 Accounting contributing to externally-led adaptation

The last two municipalities analyzed, Caserta and Napoli, were those that showed the strongest difficulties in managing the crisis. Before the crisis, similarly to municipalities in the second group, 'day-by-day' management supported by accounting tools and mechanisms was used to increase budget flexibility, and this was even encouraged by the continuous postponements of budget approval deadlines by the central government:

> The fact that we know that the deadline for the budget approval will be deferred entails, like in all organizations where planning capacity is weak, an increasingly lax behavior. (Napoli, CEO.)

Management control systems also appeared to be particularly weak:

> The main reason for our financial situation was the absence of the needed controls by the financial department. (Caserta, CFO.)

After being hit by shocks, this lack of anticipatory capacities, combined with requirements from the central government to cut expenditure and the constraints on local revenues described above, contributed to a decrease in operating expenditures between 2008 and 2012, both in Caserta (around -7%) and Napoli (almost -14%). Capital expenditure, during the same period, decreased by 87% in Caserta and 13% in Napoli. A more detailed examination of expenditure across services shows extensive cuts for cultural activities (as much as -74.5% in Caserta and -45% in Napoli), education (-21% in Caserta and -38% in Napoli), youth, sport and leisure (-14% in Caserta and -25% in Napoli), and transportation and mobility (almost -16% in Napoli).

Major expenditure cuts were made also for social services (Caserta -33%, Napoli -22%) and local police (see Appendix 2a,b,c).

Like the municipalities in the second group (Section 4.2), an enhancement of accounting mechanisms contributing to anticipatory capacity was observed in Caserta and Napoli, although in the former this was predominantly a consequence of a financial bailout procedure adopted by central government in 2008, as required by law in case of the inability to fulfill financial obligations (the same procedure was adopted in 2012 in Napoli), in which the municipality was forced to strengthen planning and monitoring systems. Italian municipalities are subject to the bailout procedure when their financial conditions are particularly serious. Municipalities subject to a bailout are placed under special scrutiny and control by the Italian Ministry of the Interior and are forced to implement measures aimed at re-balancing their budget, such as increasing the tax rates to the highest level, adopting a debt repayment plan, rationalizing expenditure, and re-organizing some internal procedures including tax-collection. In particular, as a consequence of the bailout, Caserta created an office in charge of strategic management and performance evaluation, and introduced management control systems to support decision-making; the municipality also centralized the collection of revenues in one office to improve the revenue collection rate, and specifically that for taxes, which increased from 56% to 88% between 2008 and 2012. In Napoli, after 2011 these systems were put in place mainly to improve revenue collection. This may have contributed to increasing the revenue collection rate for taxes between 2008 and 2012 from 60% to 73%.

Similar to the municipalities described in the previous section, in order to cope with shocks, particular accounting practices proved essential. In Napoli the use of slack resources, and specifically the creation and *use of reserves*, allowed the municipality to purposively benefit from higher spending flexibility, but, as mentioned above, this behavior proved risky, and indeed, in Napoli the revenue collection rate for fees and tariffs was below 40% before 2008, and did not improve visibly after 2008.

> In our budget there has been a recurrence of overestimated revenues, mainly relating to fines and local taxes. (Napoli, CFO.)

After the crisis, as in Barletta, the reliance on such reserves became increasingly unsustainable. Whereas in Barletta the opportunistic exploitation of accounting rules and practices allowed the creation of budgetary flexibility for expenditure, the municipality of Napoli proved to be less able to cope with shocks after the crisis, mainly relying on external help and funding. It may be for this reason that Napoli also moved towards the production of consolidated financial statements [7] with subsidiaries to have a clearer picture of the whole financial condition. In Caserta, the situation appeared to be even more complex, as even before the crisis, there were major cash flow difficulties due to high levels of revenues to be recovered and commitments to be paid. Cash strains affected budgetary balance and sustainability, thereby limited the municipality's capacity to cope with emerging difficulties. After the crisis, the municipality suffered further liquidity constraints and mainly relied on external funding.

> Our short-term objectives are substantially driven by external financing opportunities, especially from the European Union (EU). The municipality is currently engaged in the "PIU Europa" program, which foresees a commitment of some tens of millions: this is the only EU program that we will be able to implement in next three years, as the co-funding required from the municipality is minimal and compatible with very limited resources. Apart from this, we have no other concrete forms of planning due to our financial distress... (Napoli, General Secretary.)

The analyses of the cases of Caserta and Napoli show that, in these contexts, internal weaknesses – which become particularly visible after being affected by shocks – and the inability to rely on the traditional coping capacities, made external help the only viable solution. This, however, also brought constraints (i.e., compulsory measures such as the increase of taxes, and changes to accounting practices that led to an enhancement of the ability to anticipate shocks, as mentioned above). In sum, adaptation in these cases was mainly externally-led, i.e., municipalities were subject to external constraining forces. These externally-led approaches consisted in the adoption of the above mentioned bailout procedure (in 2008 in Caserta, and 2012 in Napoli). Because reactions were mainly motivated by the requirements of the bailout procedure, these reactions are classified as the results of *external constraints and pressures*. It was as a consequence of the bailout that the municipality started to improve its financial management:

> Another relevant reason that led us to the financial collapse is the very strong amount of revenues to be recovered and liabilities that the municipality had (over 160 million Euro, a great amount for the size of our town). Therefore, the main objective, even if not formalized, is to improve our capacity to recover revenues and to minimize the time between revenues' assessment and recovery phases. (Caserta, General Secretary.)

6. Discussion

Compared to Ezzamel and Bourn's (1990) study that found that during a time of crisis accounting was still used as an "answering machine", rather than a learning tool, our analysis provides a nuanced view of the multiple practical ways in which accounting helped (or hampered) anticipation of emerging shocks, as well as coping with them, ultimately shaping different forms of and paths towards local government resilience. In particular, with reference to anticipation, Ezzamel and Bourn (1990) found that accounting systems can act as "early warning systems", providing information about the economic and social environment, and increasing the "organization's decision readiness", and gain new relevance in the face of shocks (see also Johansson and Siverbo, 2014; Van Der Kolk *et al.,* 2015). We show that where effectively used, accounting contributed to anticipation of shocks in terms of the availability and deployment of planning and control systems which ensured municipalities were in a position to react promptly. Accounting emerged as central in ensuring an ex ante as well as a continuous appraisal of potential risks and budget conditions. More detailed accounting practices appeared to support anticipatory capacities by the performance of simulations to forecast future revenues and expenditure; facilitating early budgetary approval; and providing continuous monitoring of revenues collected, expenditure, and quantity and quality of services provided. In some cases these accounting practices were accompanied by organizational changes indicating new organizational arrangements, such as the centralization in one office of the collection of revenues (i.e., creating a new internal unit), the creation of a spending review unit, the creation of a strategic management and performance evaluation body, as well as new organizational processes, such as the increased control of subsidiaries[8]. In other cases, the absence of developed monitoring and planning systems made anticipation more difficult and required municipalities to resort more widely to coping mechanisms.

With reference to coping with shocks, building on Barbera et al. (2017), we add to extant literature that discusses notions of "coping" (Martin-Breen and Anderies, 2011), "adaptation" or "adaptive capacity" (Ezzamel and Bourn, 1990; Martin-Breen and Anderies, 2011; McManus et al., 2007) in that our analysis allowed identification of how accounting provided municipalities with the capacity to cope with potential and actual financial shocks. Accounting proved useful to coping with shocks via a mixture of short-term responses (e.g., the creation of budgetary reserves, including in the budget amounts of resources to be carried over to increase municipal “flexibility” on the expenditure side, or the “artificial” increase of the surplus, such as one-off transactions with a subsidiary in the absence of consolidation of accounts), as well as long-term responses (e.g., budget formulation as a shared process, or the improvement of internal communication and information flows).

While accounting contributed to shaping anticipation and coping with shocks, the shocks provided opportunities for investment in accounting systems, either strengthening or starting to develop new anticipatory and coping capacities.

Our findings also show the inherent tradeoffs faced by organizations in coping with shocks. On the one hand, accounting has not always warned municipalities of the potential negative long-term implications of short-term choices. On the other hand, the emphasis on a narrowly defined “financial resilience” (guaranteeing a balanced budget) would not necessarily imply the achievement of a wider and longer-term organizational resilience (i.e., the maintenance of existing quantitative and qualitative standards of services). The latter would at times be guaranteed in the short term, with uncertainties regarding future sustainability.

Finally, our study shows how the paths to ensuring financial resilience were in some cases the result of internal forces and stimuli, with municipalities autonomously improving their accounting and control systems, whereas in other cases external pressures were needed to bring about changes in accounting tools and routines in order to remedy critical budget situations. As observed above, in some municipalities self-regulating capacities were already developed before shocks, and were further enhanced after. In other cases, in which a re-orientation of actions was necessary, some municipalities appeared more able to proactively embark on the process of change than others, autonomously enhancing their capacities to anticipate and cope with shocks. This was the case for internally-led adaptation in Barletta, Forlì, Lodi, and Varese, mainly based on the adoption of opportunistic behaviors, external networking for the provision of public services, financial slack resources, and use of budgetary reserves. Yet other municipalities were found to be “awaiting” external pressures to impose a change in their actions and processes from outside. Externally-led adaptation manifested in this manner in Caserta and Napoli, both of which incurred bailout procedures, and so were forced to reduce their use of budgetary reserves and increase their reliance on funding, and were subjected to external conditions and restrictions. In these cases, where both anticipatory capacity and coping capacity were low prior to shocks, dependence on external support became essential in ensuring continuity in the provision of services and organizational survival, and was translated into pressure to implement stronger and improved accounting systems.

7. Conclusions

Responding to calls to develop a better understanding of the role of accounting under conditions of austerity and crisis, this paper aimed to explore how accounting contributes to the governmental capacities which are used to respond to shocks affecting public finances, and more specifically to municipalities’ financial resilience. Our results show that municipalities cope with financial shocks differently. Indeed, accounting can be a medium that supports self–regulation, adaptation, and change in some cases, potentially ensuring maintenance of service levels in the medium term. In other cases, accounting is found to be implicated in short-termism or even un-resilient behaviors, with such behaviors putting at risk the long term maintenance and continuity of services.

These findings suggest a richer understanding of the roles of accounting before and after financial crises, enriching what is known from extant studies. First, we highlight that, when experiencing conditions of financial crisis, organizational responses are not uniform. Accounting may play roles that differ not only before and after shocks, but also in different contexts, depending on the extent to which an organization has, in the past, developed its capacities for anticipation and coping. In particular, we show that it may be limiting to interpret accounting under austerity as merely a constraining tool, or a tool "culpable" for bringing about cutbacks and service reductions, or, on the contrary, only as a tool which supports change and adaptation. The results provide evidence of the conditions, contexts, and processes under which accounting becomes a medium capable of supporting both anticipation and coping, being a driver of cuts in some cases, but also of long-term transformations aimed at keeping the level of public services as intact as possible. It must also be pointed out that in several cases accounting was central in processes of resisting change and transformation, aimed at keeping services intact in the short term, but with more uncertain future outcomes. This highlights the existence of different patterns of governmental financial resilience, and thus of different ways of preserving the provision of public services. Second, although we recognize that accounting may act as an answering and learning (i.e., anticipation) machine, and as an idea and dialogue machine (i.e., allowing organizations to develop the capacity to cope), we emphasize that such capacities translate differently in each organization. We identify the various ways in which organizations may cope with shocks. In addition, different tensions emerge with reference to the tradeoffs between the accounting consequences of a focus on the short and long term, and between the consequences of a focus on balancing the books and on the societal implications of service provision. Third, we highlight that crises may lead to either a reinforcement or modification of past behaviors and accounting practices; it is therefore relevant to understand the factors influencing these different outcomes.

In general terms, the study confirms that in periods of higher uncertainty, cutbacks or crisis, accounting can contribute to absorption of uncertainty and anticipation of shocks; in turn, organizations tend to improve planning (and control) mechanisms to better prepare to future unexpected events (Ezzamel and Bourn, 1990), or are forced to do so. These conclusions are also partially in line with past accounting research highlighting that budget control becomes tighter in times of turbulence or financial crisis (Johansson and Siverbo, 2014; Van Der Kolk et al., 2015), and emphasizing its constraining power (Heald and Hodges, 2015; Lapsley et al., 2015; Van der Kolk et al., 2015).

Finally, differing from extant resilience literature (for example, Kendra and Wachtendorf, 2003), that tends to interpret resilience as a self-organizing capacity, the present study shows that public organizations do not necessarily respond to shocks by self-organizing, yet they may be forced to adapt by other governmental organizations, in an externally-driven process. Non-resilient behaviors can be found in the government sector, but they attract external intervention. Recent bailouts of banks have shown that this principle can be observed even in the private sector, and the principle may deserve further scholarly attention. Future research should also explore further the relationships between the financial and societal dimensions of resilience.

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Notes

[1] First-order change is labeled, in Meyer's (1982) study, as "resiliency" and implies single-loop learning. According to Meyer, adaptation involves "selective responses to feedback (Metcalf 1981) that map environmental attributes into systems capable of learning (Hedberg 1981)". Responses are based on external stimuli that are interpreted by organizations based on prevailing strategies and ideologies. An organizational response defined as first-order change, or resiliency, "occurs when responses create negative feedback loops that absorb jolts' impacts and loosen couplings between organizations and their environment" (p. 520). It is defined as "deviation-reducing" and is influenced by an organization's strategy and its slack resources.

[2] Second-order change defined also as "retention", "occurs when responses expose new causal relationships that then modify theories of action, augment behavioral repertoires, and alter structural configurations and slack resource stockpiles" (Meyer 1982: 520). It implies "double-loop learning" and is "deviation-amplifying" (p. 520)". According to Meyer (1982), retention is shaped by an organization's ideologies and constrained by organizational structures.

[3] It is assumed, indeed, that the post-crisis period includes what Ezzamel and Bourn define as real-time, as well as post-crisis, or at least a "first time-lag" of the post-crisis period (i.e., the set of practices adopted in order to face a shock and restore, as well as to eventually build new capacities in the face of future crises). According to this interpretation, a "second time-lag" of the post-crisis period overlaps with a "new" pre-crisis phase.

[4] The own-revenue ratio is calculated as (Tax revenues + Revenues from service fees and tariffs) / Current revenues. Current revenues consist of tax revenues, revenues from service fees and tariffs, and current grants and transfers from other public sector sources such as the central government.

[5] Italy's unemployment rate was 12.7% in 2014, compared to an average of 7.4% across OECD countries (OECD 2015).

[6] Building permit fees for construction of new housing are one of the largest sources of revenue for municipalities, and are used to finance investment.

[7] In Italy, consolidation of accounts by local governments (including municipalities) and subsidiaries was not mandatory until the 2011 Italian accounting reform, which aimed to harmonize Italian government accounts. Before the consolidation requirement, the creation of subsidiaries could be considered a consequence of increasing constraints on local governments' budgets and powers, such as new borrowing ceilings and hiring freezes. The creation of subsidiaries allowed local governments to provide services through these subsidiaries, which could access new debt and employ new personnel, instead of the local government. While the latter (including municipalities) tended to display positive financial results, many of these subsidiaries were found to be particularly indebted. In 2012, the Report on the Financial Management of Local Governments produced by Corte dei Conti showed that the 7,200 municipalities analyzed owned about 5,000 subsidiaries (including enterprises, consortia, and foundations) between 2008 and 2010, of which more than one third were in deficit.

[8] We thank one of the anonymous reviewers for allowing us to better emphasize how new organizational configurations and processes, in support for specific accounting mechanisms and tools, contributed to shape anticipatory capacities, thereby enhancing the value of our evidences.

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Tables

TABLE 1 *Municipalities' financial performance between 2000 and 2009*

Municipality	Population	Density (pop/Km²)	Geographical position	Financial performance* (%)										Mean (%)	Volatility (Std Dev) (%)
				2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2000-2009	2000-2009
Barletta	94,693	645	South	28.73	5.27	12.14	27.02	9.33	17.24	19.77	19.08	43.08	39.78	22.14	12.49
Caserta	74,268	139	South	1.19	0.51	1.90	15.90	9.65	0.63	6.10	6.06	-18.74	0.09	2.33	8.96
Forlì	116,029	509	North	-24.29	15.85	0.11	0.27	1.47	0.16	0.68	5.68	3.20	3.58	0.67	9.97
Lodi	43,465	1,049	North	3.92	n.a.	3.30	5.06	7.70	8.40	5.83	9.15	29.92	30.92	11.58	10.86
Modena	179,353	983	North	0.05	0.06	0.15	0.19	0.12	0.77	0.14	0.99	0.07	0.01	0.26	0.34
Napoli	959,052	8,178	South	12.99	16.70	9.33	13.53	16.58	15.99	18.20	14.11	13.27	12.09	14.28	2.62
Salerno	131,925	2,238	South	0.51	2.70	2.48	2.19	2.34	2.53	2.12	2.51	2.65	2.07	2.21	0.64
Varese	79,733	1,444	North	8.44	5.93	8.25	8.13	11.25	11.79	15.72	14.32	15.16	17.57	11.66	3.92

* Financial performance refers to the budgetary position, i.e. the normalized year-end surplus/deficit = Surplus or Deficit/ total operating revenues, with surplus/deficit = (cash + revenues to be recovered-commitments to be paid). "Acceptable" range: -3% and + 5% (see method section for further details).

TABLE 2 *The contribution of accounting to the deployment and development of organizational capacities, responses to shocks and financial performance*

Municipality	**Accounting contribution to shaping pre-shock organizational capacities and conditions**	**Accounting contribution to shaping post-shock organizational capacities and conditions**	**Responses and financial performance**
Barletta	ANTICIPATORY CAPACITY		**Internally driven re-orientation** • Absorbing shocks through the use of slacks (initially) • Decision to create a new internal structure in charge of revenues recovery • Increasing cross-unit collaboration and information exchange **Financial performance** Average high surplus High variability over time
	Low • Weak planning and monitoring processes	**Increasing** (after 2013) • Strengthening of monitoring of revenues collection	
	COPING CAPACITY		
	High • Opportunistic behaviors • Use of budgetary “reserves”	**High** • Opportunistic behaviors • Decreasing budgetary “reserves” as a consequence of increasing constraints on use of financial resources	
Caserta	ANTICIPATORY CAPACITY		**Externally driven re-orientation** • Bailout procedure (2008) • Re-organization and creation of a special unit for the recovery of revenues • Creation of an internal body in charge of strategic management and performance evaluation • Costs reduction • Payment of debts and salaries • Rent increase • Disposal of assets • Implementation of programs funded by the EU **Financial performance** Average low surplus High variability over time
	Low • Lack of a long-term planning and monitoring	**Increasing** (after 2010) • (Externally-driven) strengthening of planning and monitoring	
	COPING CAPACITY		
	Low • Cash tensions deriving from high revenues to be recovered and high commitments to be paid	**Low** (after 2008) • Liquidity constraints • Use of external resources as they become available, e.g. European funds (but subjected to external constraints)	
Forlì	ANTICIPATORY CAPACITY		**Internally driven re-orientation**

Municipality	Accounting contribution to shaping pre-shock organizational capacities and conditions	Accounting contribution to shaping post-shock organizational capacities and conditions	Responses and financial performance
	Low • Weak planning • Rhetoric of control	**Increasing** (after 2008) • Strengthening of control of revenues collection	• Improvement of revenues recovery • Equity divestment • End of borrowing and identification of external resources in order to finance investments • Decision to create PPPs **Financial performance** Average low surplus High variability over time
	COPING CAPACITY		
	Low • Reliance on external conditions and funding (i.e., use of external resources as they become available)	**Increasing** (after 2012) • Greater emphasis on the relevance of external relationships (networking with external stakeholders seen as a solution to gain access to alternative resources)	
Lodi	ANTICIPATORY CAPACITY		
	Low • Weak planning and control processes	**Increasing** (after 2011) • Strengthening of control of revenues collection and of balanced budget	**Internally driven re-orientation** • Use of slack resources (one-off transactions with the subsidiary company) • Reduction of operating costs (e.g., decrease of transfers to nonprofits, of stationery costs, of electricity costs) • Investments' reduction • Decision to create PPPs to gain access to alternative and new resources **Financial performance** Average high surplus High variability over time
	COPING CAPACITY		
	High • Opportunistic behaviors	**High** • Opportunistic behaviors • Financial slack resources • Greater emphasis on the relevance of external relationships (networking with external stakeholders)	
Modena	ANTICIPATORY CAPACITY		**Consolidation of extant behaviors** • Priorities identification • Cuts and expenditure rationalization • Increasing control on subsidiaries • Increase of revenues (e.g., fees, rents, fight against tax
	High • Early identification of risks • Strong planning, monitoring and control processes (e.g., simulations, re-budgeting)	**High** • Early identification of risks • Strong planning and control processes (e.g., simulations, re-budgeting)	

Municipality	Accounting contribution to shaping pre-shock organizational capacities and conditions	Accounting contribution to shaping post-shock organizational capacities and conditions	Responses and financial performance
	COPING CAPACITY **High** • Creation of "reserves" through a prudent approach to expenditure forecast • External networking (stakeholder's inclusion) • Internal cohesion and collaboration	COPING CAPACITY **High** • Creation of "reserves" through a prudent approach to expenditure forecast • External networking (stakeholder's inclusion) • Internal cohesion and collaboration	evasion) • Investments reduction (expenditures mainly oriented towards maintenance) • Continuous adoption of virtuous behaviors (e.g., ensuring balanced budgets, high degree of revenues collection) **Financial performance** Average low surplus Low variability over time
Napoli	ANTICIPATORY CAPACITY **Low** • Weak planning and monitoring processes	ANTICIPATORY CAPACITY **Increasing** (after 2011) • Stronger awareness about the relevance of planning • Strengthening of control processes and revenues collection	**Externally driven re-orientation** • Bailout procedure adopted in 2012 • Absorbing shocks through the use of slacks (initially) • Improving the capacity to collect revenues • Increasing revenues (e.g., from fees and tariffs) • Spending review • Moving towards a consolidated financial statement with subsidiaries • Disposal of assets and improving management of heritage **Financial performance** Average high surplus Low variability over time
	COPING CAPACITY **High** • Use of budgetary "reserves"	COPING CAPACITY **Decreasing** (after 2011) • Reducing budgetary "reserves" • Reliance on external conditions and funding	
Salerno	ANTICIPATORY CAPACITY **High** • Strong planning, monitoring and control processes	ANTICIPATORY CAPACITY **High** • Strong planning, monitoring and control processes	**Consolidation of extant behaviors** • Increase of revenues (e.g., fight against tax evasion) • Equity divestment Disposal of assets **Financial performance** Average low surplus
	COPING CAPACITY **High** • Attraction of third parties' resources	COPING CAPACITY **High** • Attraction of third parties' resources	

Municipality	Accounting contribution to shaping pre-shock organizational capacities and conditions	Accounting contribution to shaping post-shock organizational capacities and conditions	Responses and financial performance
	• External networking (PPPs) • Internal cohesion and collaboration	• External networking (PPPs) • Internal cohesion and collaboration	Low variability over time
Varese	ANTICIPATORY CAPACITY		**Internally driven re-orientation** • Freezing of expenditures • Improvement of management control systems (e.g., through the creation of a spending review unit) • Internal re-organization (e.g., merge of units) • Disposal of assets **Financial performance** Average high surplus Low variability over time
	Low • Weak planning and control processes	**Increasing** (after 2012) • Strengthening of monitoring and control	
	COPING CAPACITY		
	High • Use of budgetary "reserves"	**High** • Use of budgetary "reserves"	

APPENDIX 1 ***The role of accounting in shaping anticipatory and coping capacities to respond to shocks***

Dimension	**Operationalization in terms of accounting practices**	**Examples of interview quotes**
Anticipatory capacity	Long-term planning and control	*"We do simulations based on the limited data we have, in order to keep the budget manageable."* (Modena) *"We do not have [...] an office for management control; however, we will have to create it as a result of the new Decree. The problem is staff availability."* (Lodi)
Coping capacity	Use of budgetary "reserves"	*"No one takes the responsibility to cancel from the accounts those revenues that definitely the Municipality will not be able to recover. It is easier to leave them within the budget."* (Varese) *"The budget surplus target imposed by the central government is a likely reason* [for high performance volatility], *in particular the impossibility of using the surplus, which in our case is high, to pay for public works. Besides, […] the surplus is affected by important amounts of capital revenues to be recovered due to pending legal disputes and for […] the lack of recovery of taxes on building permits due to the crisis."* (Barletta)
	Opportunistic behaviors based on catching emerging solutions aimed at balancing the budget on a day-by-day basis	*"Currently it is difficult to have long-term goals. The economic aspects, the legislation, the limits imposed* [on Municipalities] *hardly allow* [them] *to make long-term projections."* (Lodi) *"[…] there is no medium-term planning but, conversely, we play it by ear. […] priority is given to catching opportunities, in order to get immediate advantages within the political mandate."* (Barletta)
	Networking and partnership with external stakeholders to attract external resources	*"Our idea is to create public-private partnerships."* (Forlì) *"One of the alternatives we found is to access to private capital: we have mixed finance projects, also of considerable magnitude."* (Salerno)
	Strengthening of internal cohesion (increase of internal communication and information flow)	"*We try to (…) ensure that everyone plays his or her role. (…) the cohesion of the Board is relevant, and it is oriented towards achieving goals*." (Modena) "*The role of the Mayor is essential, he is a particularly dynamic person and he instils passion to his team, while sharing responsibilities with them*." (Salerno)

APPENDIX 2 ***Trends of operating and capital expenditure***[1]

2a – Per-capita operating expenditure trend (commitment basis, 2001-2012)*

Municipality	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2008-2012
VARESE	890	911	954	970	875	857	950	969	966	1,172	1,178	1,141	17.74%
MODENA	1,123	1,010	1,071	1,139	1,168	1,034	1,081	1,131	1,155	1,159	1,145	1,088	-3.83%
FORLÌ	705	718	730	755	774	701	758	758	795	785	769	761	0.40%
CASERTA	749	858	848	870	912	923	1,026	1,012	965	931	970	937	-7.32%
NAPOLI	1,180	1,162	1,125	1,204	1,291	1,248	1,480	1,390	1,446	1,340	1,252	1,198	-13.76%
SALERNO	935	970	961	1,014	1,053	1,054	1,133	1,259	1,332	1,387	1,307	1,294	2.75%
LODI	731	738	805	834	845	992	962	1,077	1,038	1,072	1,042	1,002	-7.00%
BARLETTA	483	522	487	518	559	500	570	526	610	618	595	554	5.38%

2b – Variation of operating expenditure across main municipal services (commitment basis, 2008-2012)

Municipality	LOCAL POLICE	EDUCATION	CULTURE	YOUTH, SPORT AND LEISURE	TRANSPORT AND MOBILITY	SOCIAL SERVICES
VARESE	11.70%	5.58%	-4.69%	-3.19%	14.68%	-0.48%
MODENA	5.81%	-5.67%	-12.07%	-13.96%	3.59%	3.71%
FORLÌ	19.36%	4.45%	-19.08%	-26.59%	29.52%	4.66%
CASERTA	-9.88%	-21.17%	-74.48%	-14.15%	8.38%	-33.42%
NAPOLI	-5.05%	-38.14%	-45.20%	-24.86%	-15.71%	-21.62%
SALERNO	-5.72%	-10.01%	-13.69%	10.03%	35.65%	1.62%
LODI	18.87%	4.23%	2.33%	-29.29%	11.65%	-12.69%
BARLETTA	2.52%	-2.47%	7.23%	-21.89%	39.00%	40.70%

[1] Data were retrieved from Aida PA database and elaborated by the authors. Accessed between April and May 2018, when data were only available since 2001.

2c – *Per-capita capital expenditure trend (cash basis, 2001-2012)*

Municipality	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2008-2012
VARESE	222	175	214	171	166	152	115	303	104	80	94	109	-64%
MODENA	211	246	494	528	516	381	337	335	379	228	148	154	-54%
FORLÌ	495	380	432	709	913	917	1,187	1,526	1,782	724	435	369	-76%
CASERTA	326	385	306	319	411	448	534	511	535	157	158	68	-87%
NAPOLI	327	193	441	419	334	408	507	376	427	364	307	327	-13%
SALERNO	326	282	264	278	344	287	320	542	419	449	523	495	-9%
LODI	138	188	200	246	233	190	245	620	211	315	207	165	-73%
BARLETTA	110	122	100	192	115	160	258	314	266	165	106	94	-70%

2d – *Composition of fiscal adjustment related to the Domestic Stability Pact (2008-2012)*

	Composition of fiscal adjustment								
	Year	**Fiscal deficit**	**Variation**	**Current revenue**	**Variation**	**Current expenditure**	**Variation**	**Capital expenditure**	**Variation**
VARESE	2008	-279		993		969		303	
	2012	-88	**-69%**	1,162	**+17%**	1,141	**+18%**	109	**-64%**
	Var.	**-191**		**+170**		**+172**		**-193**	
MODENA	2008	-344		1,122		1,131		335	
	2012	-62	**-82%**	1,180	**+5%**	1,088	**-4%**	154	**-54%**
	Var.	**-282**		**+58**		**-43**		**-181**	
FORLI	2008	-1,407		877		758		1,526	
	2012	-267	**-81%**	862	**-2%**	761	**0%**	369	**-76%**
	Var.	**-1,140**		**-14**		**+3**		**-1,157**	
CASERTA	2008	-446		1,077		1,012		511	
	2012	133	**-130%**	1,138	**+6%**	937	**-7%**	68	**-87%**
	Var.	**-578**		**+61**		**-74**		**-443**	
NAPOLI	2008	-303		1,462		1,390		376	
	2012	-207	**-32%**	1,318	**-10%**	1,198	**-14%**	327	**-13%**
	Var.	**-96**		**-144**		**-191**		**-49**	
SALERNO	2008	-558		1,243		1,259		542	
	2012	-305	**-45%**	1,485	**+19%**	1,294	**+3%**	495	**-9%**
	Var.	**-253**		**+241**		**+35**		**-47**	
LODI	2008	-666		1,031		1,077		620	
	2012	-131	**-80%**	1,036	**0%**	1,002	**-7%**	165	**-73%**
	Var.	**-534**		**+5**		**-75**		**-454**	
BARLETTA	2008	-248		592		526		314	
	2012	-72	**-71%**	576	**-3%**	554	**+5%**	94	**-70%**
	Var.	**-176**		**-16**		**+28**		**-220**	

Note: According to Italian DSP budget rules, the fiscal deficit is calculated as: current revenue – current expenditure – capital expenditure