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**“Three Essays on the Politics of
Reorganization and Public Management”**

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PhD Thesis by

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*To my father, who had a cerebral stroke
two weeks before the finalization of this dissertation
and has been fighting ever since.*

*All my thoughts go to him in his role
as an appointed official who devoted his career
to public administration in Italy.*

*I hope he recovers and reads
this dissertation one day.*

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Introduction

Reorganization is one of the most persistent and multifaceted phenomena in public administration. However, there does not seem to be consensus either on its theoretical definitions and determinants or its empirical consequences. This dissertation aims to offer theory and mixed methods evidence to contribute to some of the most controversial angles of the debate on reorganization.

The first essay sets the stage with a systematic review of the existing literature on reorganization in the public sector. The objective is to classify the different definitions and explanations that have been proposed with a critical stance that highlights gaps and disagreements. Building on 122 articles published between 1975 and 2022, I investigate three interrelated questions: What are the definitions of reorganization most often used in the literature? What are the antecedents and determinants of reorganization reforms of the (local) public sector and agencies? What are the different definitions of organization, and how do they affect the definition of reorganization?

The review reveals at least three conceptualizations of reorganization, closely related to the concept of termination and transversal across decades, with no consistent chronological patterns. Some scholars define reorganization as overlapping with termination, whereas others conceive of the latter as a type or a possible consequence of the former, and others separate the two as completely distinct phenomena. These different conceptualizations are also dependent on different definitions of organization, more or less inclusive in terms of minimum distinguishing requisites. Unsurprisingly, the lack of consensus on the definition of reorganization and organization reflects various, sometimes antithetical, categories for the drivers of reorganization, which include efficiency, political, and managerial NPM drivers together with the adaptation to external pressures and response to crises. The systematic review raises a provocative question as well as a methodological one: What if the proposed explanations mask hidden drivers? What if the lack of

consensus depends on the myopia of methodologies used, with nearly no attempts at mixed methods research, and on the limited geographical coverage of case studies?

The second article proposes to answer both questions.

Indeed, I investigate the possible political motivations masked behind the efficiency claims in the empirical case of mergers of public health agencies in Italy, and I use mixed methods to help overcome the limitations of qualitative or quantitative-only studies. The NPM doctrine in the late 1980s and early 1990s tended to neglect the evidence that reorganization in the public sector is often led by political and ideological goals in addition to economic objectives. This has important consequences in terms of electoral and managerial accountability, and it can be a moderator of efficiency and performance. The quantitative results of my article show no evidence of cost savings in post-merger public health agencies as opposed to never-merging or not-yet-merged ones, and possibly a deterioration of health care service provision and quality. The qualitative interviews reveal the micro-level mechanisms internal to the organizations that followed the mergers, which pointed to several candidate explanations for the lack of scale efficiencies.

The third article, co-authored with Vincenzo Galasso, departs from another canonical explanation for reorganization emerging from the systematic review, which links it to the crisis response paradigm. The focus is on blame avoidance and on the strategies adopted by country leaders in their public communication when crises make them face the risks of electoral accountability. Well-performing first-resort units, such as local health agencies during Covid-19 in Italy, play an essential role in times of urgency and crisis, and poorly-designed reorganization reforms can create disorganization and uncertainty about roles, tasks, and information flows. This might make it more difficult for citizens to assess the individual responsibilities of elected and appointed actors, frustrating the transparency required for electoral accountability. A quasi-natural experiment

allowed the assessment of the causal effect of the Prime Minister's speech on citizens' perceptions of government responsibility for the crisis and their beliefs in the adequacy of the economic and health measures taken to counteract it, as well as on public sentiment towards the future of the economy.

Successful crisis management and blame avoidance should combine targeted and informative political communication and effective policy implementation in a fast-responding national health system. This perspective and recommendation can also apply to the finding of the second article of this dissertation. If the mergers of public health agencies fail to produce cost savings and possibly also decrease performance, it would be interesting to investigate two related questions. The first is whether the public will notice and react adjusting their perception towards the political actors who implemented the reorganization - provided that a coalition can remain in office long enough to observe the effects of its reforms and we do not end up in a circle of blame shifting whereby a political party is blamed for the negative outcomes of a reform that it did not put forward. Relatedly, it would also be interesting to ask at what degree of deterioration in the quality of care the general public would become aware. The second is if political leaders can use rhetorical strategies to try to hide the negative outcomes of the reforms they implemented or, in case of a coalition change, to instead magnify them to challenge their political opponents.

In a nutshell, what the reader can expect from these essays is for them to shed light on some of the - hidden or not-so-hidden – dynamics concerning politics and accountability in the context of public health reorganization reforms.

Essay 1: Understanding administrative reorganization: A systematic review

Despite alternating waves of interest in this field of research over the past half-century, the problem of reorganization in public administration has not received comprehensive treatment to date. Public administration scholarship has explained organizations more often than reorganization, with some inconsistencies in the definition provided, while in recent years the prevailing tendency has been to prioritize empirical assessments of the effects of reorganization at the expense of a comprehensive theory explaining what it is and why it happens (Berkman and Reenock, 2004; Lewis, 2004; Chen et al., 2019; 2022). Whereas there have been several attempts to review the evidence on the definition of termination (Kuipers et al., 2018; Adam and Bauer, 2018), comparable contributions to the problem of reorganization and to how it relates to the problem of termination seem to be lacking. A large part of the literature has departed from the assumption that the latter is a subset of the former, thus showing little further interest in the issue.

This article reviews the scholarship of the past five decades on reorganization in the public sector to answer three interrelated questions. What definitions of reorganization are most often used in the literature? What are the antecedents and determinants of reorganization reforms of the (local) public sector and agencies? What are the different definitions of *organization*, and how do they affect the definition of *reorganization*? By analyzing evidence from more than 120 studies published by more than 30 different academic journals or international editors over the past half century, this review found that the inconsistent definitions of reorganization and its relation to termination are closely related to inconsistencies in the definition of the organization itself.

Four non-mutually exclusive suggestions to solve this issue are proposed.

The first is to expand the range of empirical methods by integrating quantitative and qualitative analyses to combine the strengths of both methodologies. The second is to foster more interdisciplinary dialogue, thus combining scholarship from disciplines other than public administration that have been investigating the same or similar issues from different perspectives. The third is to promote cross-country comparisons of the conceptualization and determinants of reorganization to obtain a better understanding of the role of changing institutional, political, socioeconomic, and environmental factors and externalities in the framework. Finally, the empirical setting of the studies on reorganization published in the past half-century and included in the systematic review shows a bias towards high-income and fully developed countries, with the dominance of the US, the UK, and European countries. However, a consistent research agenda for public administration in developing and/or low and middle-income countries is being established in recent years (Bertelli et al., 2020), and the discussion on reorganization could benefit from expanding its geographical focus in this direction.

Methodology

The selection and acceptance criteria for articles for this review follow comparable research in the field (Cucciniello et al., 2017). Articles were selected if they were published in journals of public administration, political science, or (public) management and sociology. Books from established publishers in such disciplines were also included for selection. Unpublished reports or commentaries were excluded, but Ph.D. theses and conference proceedings were considered for eligibility. The keywords used for the electronic database and journal search were: “*reorganization local government*”, “*local government reorganization*”, “*public agency reorganization*”, “*public agency reorganization*” (and alternative British English spelling “*reorganization*”), “*local (public) agency amalgamation*”, “*(local public) agency termination*”, “*government restructuring*”, “*administrative agency reorganization.*”

The search process started with a keyword search on Google Scholar, followed by a search of the websites of the most relevant journals of the selected fields, which were identified through consultation with an expert on the review topic. The final list of articles was eventually double-checked with forward and backward referencing of a sample of seminal articles. Final inclusion was decided upon after screening the abstracts, and when in doubt also by reading the introductions and/or conclusions. Only English-language articles published between January 1975 and September 2022 were considered for inclusion.²

The criterion for screening was to include only articles that had at least a theoretical section, so empirical works were included only if they provided some relevant theory to be tested. Articles in

² The choice of 1975 as the start date for the review is motivated by the seminal contribution of Kaufman (1976). The only exceptions due to their relevance and important contributions are Arnold (1974) and Rhodes (1974).

which reorganization appeared only as independent variables were excluded. A total of 192 articles were identified through a keyword search of electronic or journal databases and consultation with an expert. Of these, 70 were subsequently rejected after screening the abstract if they were either i) out of scope, ii) considering reorganization only as an independent variable, iii) focusing on not-for-profit agencies or international organizations rather than on central or local government agencies, or iv) focusing on the cabinet or legislative sphere rather than on central or local government agencies.

Furthermore, to limit the scope of this review which is already quite extensive, we decided to limit the discussion on reorganization in public administration to those changes that alter or terminate a public organization but always maintain it in the public sphere, without transforming it (fully or partially) into a private one.³

Public Administration is the journal most frequently represented, followed by *Local Government Studies*, *International Journal of Public Administration*, *Administration and Society*, *Public Organization Review*, and *Governance*. The central framework of the review thus builds on public administration scholarship, but it is complemented by insights from other disciplines, mainly

³ This criterion thus excludes contributions that deal with the determinants and consequences of privatization, considered as either the contracting out of government-funded services to private entities, which can entail the maintenance of public financing with a shifting of production to the private, or a complete sale of government assets, or different nuances including deregulation and liberalization of previous state-owned monopolies (Hodge, 2018; Pack, 1987; Winston et al., 2002). Following a wave of policy proposals and reforms in this direction enacted in Europe in the '80s and '90s, the discussion on privatization has benefitted from a large stream of research, which often portrayed it as a reaction to the excessive growth of the size of the government and of public expenditure from the After War to the late '70s. Under these lenses, privatization can thus be considered an alternative to restructuring and reorganization for the pursuit of increased efficiency and competition as well as political autonomy and accountability.

political science. The main conceptual focus is on change at the level of the organization as a whole, rather than on the termination of policies or programs only. However, Section 4 emphasizes that this distinction is far from sharp, and thus some arguments will necessarily touch upon both domains (Adam and Bauer, 2018). As for the geographic scope of the articles, the vast majority are US- or UK-based, followed by Australia, New Zealand, and Canada. Among European countries, the most represented are those of the Scandinavian and Benelux areas, followed by Italy, Germany, France, Austria, Portugal, and Spain. Among non-European countries, contributions from Asian settings increased from the beginning of the 2000s. A few articles discuss government reorganization in the case of developing countries and/or non-democratic regimes, such as Zambia, Kenya, and China.

Figure 1 shows the frequency of publication years of accepted articles, and Figure 2 summarizes the steps for the identification, screening, and inclusion of the articles in this review, following the PRISMA conventions (Page et al., 2021).

Insert Figures 1 and 2 about here

The definition problem

What is reorganization?

The choice to limit this review to articles published after 1975 is not arbitrary. Given the enormous, long-lasting legacy that followed this seminal publication, the discussion on reorganization has to depart from Kaufman (1976), who laid the foundation for research in this field. Kaufman, like several other scholars in those years, had a conceptualization of reorganization that overlapped with the concept of organizational death, so the two terms were almost synonymous in the US-based scholarship of those years.

Nevertheless, we believe that it is important to acknowledge some important contributions that preceded and paved the way to Kaufman's questioning of the immortality of government organizations. A substantial amount of these (Fox, 1973; Mansfield, 1969; Robinson, 1971; Arnold, 1974) deal with the reorganization of the Executive branch (departments and independent regulatory agencies) in the US that was carried out through a batch of presidential committees (the Brownlow Committee study under Roosevelt, the two Hoover Commission studies under Truman and Eisenhower and the three Ash studies under Nixon. Musicus (1964) focuses in general on the ex-ante objectives, civil society reactions, and effective realization of these reorganization efforts, and it also anticipates the debate on the boundaries of organization and programs by concluding that organizational changes should anticipate expected changes of programs, but it rarely happens so.

The reorganization of the executive sphere is excluded from the scope of this review for the sake of drawing boundaries between the elected and the appointed. These very boundaries were the object of heated discussions in those years, and Federal executive reorganization was perceived

as a very informative setting for reasoning on the tension between administration and politics (Arnold, 1974). If some other reorganization proposals in the US also deal with subnational governments such as metropolitan areas (Scott, 1968), it is England that drew the most scholarly research attention in local government following profound structural changes brought by the Local Government Act of 1972 (Dearlove, 1979; Ashford, 1976).

The interest in this massive reform of British municipalities was so widespread that Rhodes (1974) defined reorganization itself as “the local government structure and functions laid out in the Local Government Act” (p. 6). Attempting a more comprehensive definition, Grafton (1979) answered the same question a few years later by defining four modes in which it can manifest, from agency elimination to a department shift or a change in status from one organizational category to another, or the combination of two or more agencies into one, or the division of an agency into two or more parts, or also any major addition to or subtraction from agency functions. Later scholarship retained the tendency to answer the question “What is reorganization?” by providing different typologies and dimensions on which to evaluate the changes in the new agency (Garnett and Levine, 1980; Owens, 1985). Grafton’s theory of agency conceptualization also provides one of the first attempts to bridge the discussion concerning termination, reorganization, and creation: agency conceptualization must precede agency creation, or else a continuous process of creation, destruction, and reorganization will ensue until a full conceptualization is reached. Termination was thus considered a type of reorganization, with an early acknowledgment of the problem of precisely identifying the moment when we could consider an agency as ended.

In the scholarship of the 1980s, the question of what reorganization was became closely associated with a discussion of the goals that it was expected to achieve. This led some scholars

to classify different types of reorganization based on their primary objectives, somehow confounding the dependent and independent variables of analysis (Salamon, 1981). Incongruousness between stated goals and effective implementation brought a definition of reorganization as an impulsive reaction to problems (Owens, 1985), which echoes the “garbage can” by March and Olson (1983). Alternative definitions and classifications of reorganization were also proposed that do not focus on its outcomes but on the level of government involved and on changes in decision-making levels, tasks, roles, and intergovernmental relations (Kjellberg, 1985), while the quest for modernization was considered among the drivers, but also almost a synonym of reorganization itself (O’Leary, 1987).

After several attempts at understanding the nature of the reorganization in the 1970s and 1980s, even if sometimes with contradictory or even antithetical results, research in the late 1980s and early 1990s seemed to put aside the definition problem to shift the focus to the antecedents and outcomes of reorganization. These years were thus marked by an expansion of the evaluation of reorganization reforms in countries other than the UK and the US, for instance, France (O’Leary, 1987), the Netherlands (Derksen, 1988), and Belgium (Brans, 1992). However, there was still little theorizing of the problem of reorganization: classifications rather than definitions of reorganization were proposed, for example, in Boyne (1992), or explanations for divergent trends of reform among countries (Schwartz, 1994; Wright, 1994; Norris, 1997).

Frantz (1992) recognized that little theorizing of policy⁴ termination had occurred in the 1980s, yet the article proposed a critical evaluation of the factors encouraging or discouraging it, rather than providing a (clear-cut) definition. Chackerian (1996) elaborated on three fundamental

⁴ Frantz, as many other scholars in this period, treats the terms ‘policy’, ‘agency’, ‘organisational’ or ‘public institutions termination’ as almost synonyms. Section 4 provides a critical assessment of different conceptualisations.

questions: “Why do reorganizations occur? Why are certain forms adopted? What difference does this make for efficiency or policy?” No direct definition of reorganization was proposed, but the article provided a partially tautological definition of comprehensive reorganization as involving creation, abolition, or *reorganization* itself, which suggests that termination should be considered a form of reorganization.

The reorganization literature of the early 2000s witnessed two parallel trends: i) a refinement of empirical methods to include more quantitative analysis for testing hypotheses on the drivers and consequences of reorganization and ii) a revised interest in the definition problem. Rather than treating policy and agency reorganization, including major structural changes, as conceptually separated from policy and agency termination, Daniels (2001) referred back to early scholarship, which treated the two concepts as interrelated, if not synonyms (Grafton, 1979). The question of what reorganization is was reformulated in terms of what is the exact point when a reorganization process alters the original policy, program, or organization to such an extent that we have to talk about *partial* or *full termination*. This question mirrored another important one: “Do all reorganization processes entail termination?” Geva-May (2001, p. 264) claimed that “termination differs in its main outlines from the better-known phenomena of policy initiation, adoption, and change. In recent years, management literature has dealt mainly with less radical resolutions such as initiations and change “implying a conceptualization of organizational change and reorganization as different from, and perhaps subordinated to, termination.

The same period expressed some interest in the research on the forms of governmental reorganization that fall under the umbrella of ‘government restructuring’. These included

cessation of services in the taxonomy⁵, implying that termination should be conceived as a type of structural change. However, this research seemed to neglect the uneasy task of defining reorganization to prioritize a discussion of *how* reorganization takes place, e.g., by delineating the opposition between comprehensiveness and incrementalism of reforms (Berkman and Reenock, 2004). Nevertheless, this strand of research has also contributed to revitalizing the definition problem. Indeed, it defines reorganization as including both agency creation and abolition, which implies that termination is considered part of the reorganization process. Conversely, it is not necessarily the case that all instances of reorganization involve termination. The second decade of the new century marked a change, with some radical contributions to defining, mapping and circumscribing the definition problem. Rolland and Roness (2011) delineated a taxonomy of organizational change consisting of creation, survival, maintenance, and termination. Agency termination and creation are further embedded in five possible forms of reorganization or organizational change, including secession, splitting, absorption, merger, and complex types of reorganization that do not fit the other four categories. This definition considered termination and creation to be parts of the reorganization process, so every major organizational change should entail deaths and births. As such, it challenged the very assumptions of the study of organizational survival, raising important questions. Should we consider an agency dead, even if it splits into two, and one of them retains the former name? Or should we instead adopt a more stringent definition of termination when there is no replacement and no new agency creation at all?

In this spirit, those years were marked by research aimed at a comprehensive mapping of

⁵ In addition to service cessation, which is the least frequent typology, Warner and Hebdon (2001) included inter-municipal cooperation, privatisation, reverse privatisation (contracting back in, governmental entrepreneurship behaviour).

organizational changes that is instructive of the definition problem and attempts to clarify certain previous inconsistencies or ambiguous definitions (MacCarthaigh, 2012; MacCarthaigh and Roness, 2012). Indeed, their definition of merger and splitting phenomena specified that combining or dividing organizations cease to exist, implying that organizational death should be considered not only as an event type on its own but also as a subcategory of mergers. Their definition of organizational replacement also implied, though less explicitly, the death of the previous agency. Organizational termination was therefore conceived as a category broader than organizational death, as the latter is one of the four reorganization events that lead to termination, together with replacement, mergers, and splitting (MacCarthaigh and Roness, 2012; Nakrošis and Budraitis, 2012).

Finally, the past ten years have been marked by a flourishing of empirical studies adopting a wide range of quantitative techniques for the study of i) “pure” termination: survival analysis, event studies, and logistic regression on survival likelihood (O’Leary, 2015; James et al., 2016; GreLHAey and Hanretty, 2016); ii) different forms of amalgamation and their effects, especially on cost savings and scale economies: DEA (Drew et al., 2016), before-and-after analysis (Hanes, 2015), differences-in-differences (Blom-Hansen et al., 2021), and ex-ante cost estimations (Kortt et al., 2016). Due to their mostly empirical nature, many of these articles overlook the problem of defining reorganization, but some exceptions ground their evidence on solid theoretical foundations.

O’Leary (2015) provided a conceptualization of termination that seems broad and narrow at the same time. It is broad in scope in that it applies to the conclusion or cessation of government functions, policies, programs, or organizations, yet narrow in definition, in that it only appears to include full conclusion or cessation. However, he noted that mergers, policy changes, and

organizational restructuring might escape this definition. This revises the question of what distinguishes termination from broader taxonomies of reorganization, which might include diverse forms of change or succession, be partial, or take time to fully realize.

Bertelli and Sinclair (2018, p. 1) acknowledged that “termination is a multifaceted choice, and closing an organization is not an ultimate act of controlling it: its functions will persist either inside or outside of government.” Indeed, they classified reorganization based on the level of independence that governments decide to leave agencies. The termination of an administrative agency, thus, should not be assumed as a “final functional disposition”, but as a type of reorganization whereby all its functions are transferred to another agency after independence is removed. This seems to be in line with MacCarthaigh’s (2012) conceptualization of organizational termination as a category broader than death, as termination can also be caused by mergers or replacement. This debate was explained in a scoping study by Kuipers et al. (2018). The main question is why some public organizations die, whereas others survive under similar circumstances. This cannot be separated from yet another reformulation of the definition problem: What are the boundaries of termination and reorganization?

According to Kuipers et al. (2018), on the one hand, we have a conceptualization of termination as resulting from functional form changes, including mergers or acquisitions, which implies that termination can result from reorganization (Bertelli and Sinclair, 2018). On the other hand, we find supporters of a binary and more stringent definition whereby we can talk about the termination of public organizations only if they cease to exist in any possible form and period, meaning that termination is not a possible consequence of reorganization (O’Leary, 2015). All possible reorganization events, including absorption, mergers, secession, splitting, or other major changes, constitute forms of survival through adaptation. Among recent contributions, Ryu et al.

(2020) provided a seemingly opposite definition of government reorganizations as either the birth, death, or succession of a government organization at the ministerial level and defined reorganization intensity in a certain country as a sum of the total occurrences of either event each year. Table 1 summarises the four main answers to the “double” definition problem—of reorganization and termination—as they emerged from this review. Reorganization has been considered as: i) distinct from termination, ii) one of the possible causes or forms of termination, and iii) overlapping with and equivalent to the termination.

Insert Table 1 about here

The motivation problem

What are the antecedents of reorganization?

Having reviewed all possible sets of answers to the definition problem, this section attempts to summarize the most frequent antecedents and drivers of reorganization according to the literature. Four main categories emerged from the articles in this review, based on the following:

- Efficiency explanations
- Political influences
- Managerialism and NPM influxes
- External forces and organizational landscape

Tables A.1 to A.4 in the Appendix classify the articles in this review according to these categories.

Efficiency and politics

The first category includes well-known explanations suggesting that government reorganization (and amalgamation or absorption) should lead to the rationalization of resources and economies of scale or scope, for example, in response to fiscal or financial imperatives for cost containment and through enhanced competition (Grafton, 1979; Boyne, 1992; Norris, 1997; Andrews, 2013; Swianiewicz, 2018; Steiner et al., 2016). Inspired by the private sector and originally developed in the United States and the UK, these explanations were subsequently applied to the context of the reorganization efforts of other countries, mostly in Europe.

The second category brings together two conceptually distinct but related classes of explanations.

They include i) variables concerning ruling parties and opposition, such as ideology, electoral turnover cycles, co-partisanship, and the agency itself, such as media and political salience, as well as ideological distance from the government, and insulation (Chackerian, 1996; Daniels, 2001; Lewis, 2004; MacCarthaigh and Roness, 2012; Bertelli et al., 2015; O’Leary, 2015; Ryu et al., 2020, Chen et al., 2022), and ii) mechanisms related to political struggles among actors, such as bureaucratic politics, clientelism dynamics, mechanisms of accountability and control, blame management strategies, democratic participation (Rhodes, 1974; Grafton, 1979; Owens, 1985; Thomas, 1993; Wright, 1994; Leach, 2009; Andrews, 2013; Garlatti et al., 2020).

This typology of explanations for reorganization can be ascribed to an argument central to the literature on political science and public administration and deeply rooted in the institutional system of the US where it originated. This is the paradigm of bureaucratic delegation and political control that flourished after the fundamental contribution of the McNollGast scholarship (McCubbins et al., 1987; 1989). This paradigm departs from the assumption that delegation is a fundamental characteristic of representative democracy: citizens delegate policymaking power to legislators, who in turn delegate it to the executive sphere of elected politicians, and lastly to the bureaucratic apparatus with the task of policy implementation (Krause, 2011; Bertelli, 2021). This leads to a widely discussed democratic dilemma: appointed civil servants often have relevant policy experience and knowledge, yet granting them unjustified power is questionable because they are not directly politically accountable (Hong and Park, 2019).

The main problem with this paradigm is, therefore, to ensure that the policy decisions taken along the chain are ultimately accountable to citizens. Two main solutions have been proposed: mechanisms of control based on monitoring, oversight, and sanctioning, and mechanisms based on the design of administrative procedures (McCubbins et al., 1987). Proponents of the political

control view affirm that agency reorganization can be an example of the second instrument, as “administrative reforms can be a mechanism for enhancing political control of the bureaucracy, for example by predisposing agencies towards policy choices preferred by the politicians and by their electorate” (Balla, 1998, p. 663). However, if events such as agency creation and survival have often been investigated under these lenses (Howell and Lewis, 2002; Lewis, 2004), there seems to be limited research on the political control of the bureaucracy paradigm in the case of reorganization reforms in a more comprehensive sense. For instance, although they mention some of the political explanations reviewed above, Adam and Bauer (2018) do not explicitly discuss or explain the dynamics of political control and insulation among the factors increasing the likelihood of termination.

Under this paradigm, a key characteristic that explains an agency’s survival is the extent to which it is insulated from political control, either from the executive or from the legislative sphere. The higher its degree of insulation, the more it will resist attempts of change and termination coming from a new majority coalition whose preferences are different from those of the coalition that created it (Carpenter and Lewis, 2004; Lewis, 2004; Lewis, 2004b).

The concept of insulation in political science scholarship finds a counterpart to that of veto points in the public administration paradigm of public choice theory. This paradigm expands its focus well beyond the US and posits that different forms of reorganization, including increasing centralization, control, and coordination, can become means for representative authorities, especially from the executive sphere, to reinforce their authority vis-à-vis the bureaucratic sphere and ensure that policy implementation follows the will of elected representatives and the electorate (Aucoin, 1990). Veto points are thus the formal and factual institutional constraints bureaucrats can use to counteract and oppose political influence and action, as well as pressure

for reforms (Knill, 1999). The public administration viewpoint thus seems to highlight the same phenomenon from a different angle: not focusing on politicians undertaking reorganization to control the bureaucracy, but rather on bureaucrats defending their interests against politicians imposing theirs (Christensen, 1997).

This argument resonates with another important distinction in the PA literature concerning autonomous versus instrumental bureaucracies (Knill, 1999; Painter, 2004). Autonomous bureaucracies are those systems where the political sphere is relatively weak: there are several veto points, and the administrative system enjoys considerable independence and power in the process of policy implementation and formulation. Administrative reorganization imposed from outside the bureaucracy will thus not be very likely, as there is limited potential for “reformability” in this sense (Knill, 1990). Conversely, in independent bureaucracies, we should expect more reforms imposed by political leaders, as the role of bureaucrats is more instrumental to the preferences of political leaders, and there are fewer veto points.

Management and the organizational environment

Explanations centered on managerial considerations and New Public Management became popular in the late 1980s. They affirm that reorganization should increase administrative capacity and improve managerial rationality, enhance the autonomy of professionals within an organization, increase competitive forces from the public sector learning from the private sector, and improve local service provision (Derksen, 1988; Thomas, 1993; Schwartz, 1994; Wright, 1994). Under these lenses, reorganization, and in particular, the forms of decentralization, deregulation, and devolution, can be pursued to increase the ability of managers to perform their tasks (Aucoin, 1990). The evaluation of reorganization under these lenses originated in the

context of the UK, but it was then exported to several other European countries, such as the Netherlands (Dersken, 1988), and Scandinavian and Antipodal countries (Schwartz, 1994).

The fourth and last category portrays reorganization as a response to external and generally exogenous forces. The most frequently discussed include pressures for innovation and modernization, such as urbanization and development of the welfare state (Garnett and Levine, 1980; Kjellberg, 1985; Wright, 1994), and external crises in the broadest possible definition of the term, including, but not limited to, economic, ideological, institutional, and political crises (Schwartz, 1994; Berkman and Reenock, 2004; Norris, 1997; Galasso and Varriale, 2022).

A conspicuous body of literature argues that organizations react to these external threats by taking those forms that are fitter for survival, whereas those who fail to adapt are doomed to die (Hannan and Freeman, 1989; Chackerian, 1996). Survival by adaptation or death depends on inner organizational characteristics, so not only on the learning process but also on luck; it is a matter of change or chance (Adam et al., 2007; O'Leary, 2015; Corbett and Howard, 2017; Kuipers et al., 2018). However, this theory is not exempt from some inconsistencies and disagreements. For instance, Boin et al. (2017) summarised research supportive of the opposite argument, namely that inertia, meaning a lack of adaptation and preservation of the status quo, can in some instances increase the likelihood of organizational survival.

This theory of organizational reaction to external pressures can be included in a broader definition of the efficiency paradigm. Indeed, it ultimately refers to the adaptation techniques that organizations adopt to become *efficient* in coping with external forces, such as crises of an economic, institutional, political, natural, or health nature. It also presents some analogies with the literature on “reformability”, as in Aucoin (1990) and Painter (2004). In autonomous bureaucracies, administrative reforms and reorganization will not follow a top-down imposition

by the political sphere; rather, they will be pursued by bureaucratic intelligence in response to external and critical contingencies, often in an incremental-adaptative scheme rather than a comprehensive manner (Knill, 1999).

A critical stance

We now return to the first two categories of antecedents for reorganization. Efficiency explanations emerged as core values for public administration, as well as key drivers of reorganization from the seminal articles included in this review. Interestingly, these early contributions already recognized the links between efficiency and political explanations.

Arnold (1974) discussed the importance of providing a definition of efficiency that is specific to public administration, acknowledging that it should not be oriented to profits, but rather to political power, which is what distinguishes it from business administration. Salamon (1981) (p. 480) defined economy and efficiency as ‘potent political symbols’, and Boyle (1979) (p. 458) reinforced this claim, noting that “classical writers assumed that reorganization was motivated by the desire to improve organizational efficiency. More recent studies have demonstrated the multiplicity of goals that are served by reorganization. Indeed, they have argued that bureaucratic politics is a better predictor of reorganization than administrative rationality.”

Toward the late 1980s and early 1990s, scholars tended to juxtapose these two categories of drivers instead of reasoning on their complementarity (Owens, 1985; March and Olson, 1983; Boyne, 1992; Thomas, 1993) or focused on operationalizing and empirically testing the efficiency claim rather than discussing its deep meaning (Derksen, 1988; Warner and Hebdon, 2001).

In debating the rhetorical versus real drivers of structural reforms, Chisholm (2000) highlighted how changes in the tier system of British local government were expected to increase political

accountability and control across all layers, including the democratic participation of citizens as representatives of taxpayers' interests. Rather than scale economies, it is the mechanism of financial accountability that should promote cost savings and efficient resource usage. Fleurke and Hulst (2006) also considered this a possible lever to strengthen local democracy and efficiency in the context of government decentralization.

Also, Lewis (2002, p. 91) argued that the “termination of agencies ostensibly to improve economy and efficiency or remedy administrative failure, however, has political overtones”, suggesting that the true determinants behind efficiency arguments are to be found in political variables, such as competition among agencies, the need to insulate from presidential control or political opposition. Political opportunism can also influence the efficiency motives for reorganization, especially amalgamation reforms (Garlatti et al., 2020). Indeed, politicians might expand agency size above what is needed for scale economies for personal prestige or choose which agencies to amalgamate to maximize future electoral chances. Pre-merger phases might also provide incentives for free riding and overspending before implementation.

Daniels (1995) supported DeLeon's (1987) claim that termination is better explained by drivers of values and ideologies than by those related to economies and efficiencies. The fact that economic drivers often mask political ones also seems to be evident from the reorganization reforms of undemocratic and developing countries in the early 2000s (Otenyo, 2008). Summing up this argument from a cross-country perspective, Ryu et al. (2020) argued that political factors are more important for explaining government reorganization than administrative or managerial rhetoric related to cost efficiencies, as “many government decisions are political decisions which are given ex post de facto administrative and functional justifications” (p. 13). Two provoking questions arise in summing up these arguments: Do efficiency and politics make up different

categories, or are they just a mirror of each other? Given all these contradictions in the proposed drivers of reform, are there several explanations for reorganization, or is there no explanation at all?

The definition problem, revised

What is the *organization*?

The articles in this review provide conflicting and often limited definitions of reorganization and its determinants. This problem might be caused by contradictory definitions of the concept of the organization itself. This section engages in a reformulation of the definition problem in terms of what a public organization is and how this might impact the problem of reorganization.

Following Kaufman (1976), Grafton (1979) considers agency termination conceptually different from program termination, as the latter might continue to exist after the former has been eliminated, sometimes under new names but with the old content, or even change radically but retain the old name. However, the scholarship of the 1970s generally treated policy and organizational change and termination together, possibly creating some confusion (Adam and Bauer, 2018). DeLeon (1978) included programs under the umbrella of agency termination: “policy” is meant to include governmental functions, organizations, and programs, as well as policies themselves” (p. 374-375). This definition appears contradictory, as it suggests that an organization is therefore at the same time part of a policy and distinct from it (Greenwood, 1997). Davies and Rose (1988) conceptually separate programs and organizations, yet they stress that the two are profoundly intermingled, as changes in programs can affect the whole organization involved. Indeed, the launch of a new program automatically defines the birth of a new organization, just as the merger of two programs causes the merger of the respective organizations. Reorganization efforts are generally motivated by the goal of improving program efficiency.

Greenwood (1997) considers policy and organizational terminations to be distinct from each

other, and he acknowledges that the termination of the former has been less investigated than that of the latter. Bothun and Comer (1979) distinguished functional from structural termination. The former is the elimination of government activities and outputs (which include policies and programs), and the latter implies decreasing resources or fully terminating institutions, organizations, or agencies. This view, therefore, suggests that policies and programs are sub-units of organizations or agencies. Other scholars, such as Bardach (1976), suggest that the decision of whether to consider organizations, policies, and programs under the same conceptual umbrella or as distinct from each other should be taken on a case-by-case basis. In some instances, terminating one of them also implies terminating the other automatically, while in other cases this is not necessarily true.

In a later contribution, DeLeon (1987) also tried to provide a detailed taxonomy of these different concepts, listed by increasing the ease of termination. Functions are defined as the services provided by the government to its citizens, whereas organizations are constituted by groups of individuals who are part of a (public) institution. Policies are instead strategies addressed at solving specific problems, whereas programs are the closest elements to the problem itself and are also the easiest to end. Thus, what distinguishes policies and program termination is largely a matter of magnitude or scope, as in Bothun and Comer (1979).

Organizations tend to have a much greater likelihood of abolishment than functions, but DeLeon argues that full organizational termination is rare in practice. Programs are on the opposite side of the termination spectrum than functions, as they receive the smallest investment and resource commitment from the organization, which increases their likelihood of termination. This still does not fully clarify the hierarchical and conceptual relationships among organizations or agencies and functions, policies, or programs. O'Leary (2015) remarks on this issue by noting

that previous literature left unclear whether functions, programs, and organizations are different forms of policies or whether the termination of organizations and agencies should be distinct from that of policies, as supported by Kaufman (1976). Yesilkagit (2021) rejects this argument in the view that administrative agencies are part of broader public policy programs. MacCarthaigh and Roness (2012) highlight another important issue for the organizational definition problem: public organizations, especially large ones, might have many sub-units and subdivisions that might be considered organizations themselves. However, no solution or guidance for interpretation is proposed.

Different definitions of an organization are therefore expected to affect what we define as reorganization, yet the literature does not seem to have adequately acknowledged this. Can we talk about reorganization, organizational change, or termination if only the program or policies of a specific agency are involved, or is this condition not sufficient, and do we have to consider processes that affect the whole of the entity?

Empirical approaches and geographical scope

This section concludes with an analysis of the research methods adopted in the articles reviewed and their geographical coverage. Slightly more than four in ten of the articles included, and almost all of those published before 1990, are purely theoretical, or they illustrate their theory with descriptive evidence from one or few case studies. One in three articles used quantitative analysis, whereas fewer than one in ten articles supported theoretical claims with qualitative analysis of semi-structured interviews or miscellaneous documentation. Four articles were reviews of the literature, and eight were full-length books or book chapters.

As for what pertains to quantitative analysis, apart from a few early exceptions, e.g., Boyle (1979) and Garnett and Levine (1980), we need to wait until the end of the 1990s for the introduction of advanced techniques, e.g., survival and event history analysis. These became very popular in the early 2000s (Lewis, 2002; Greve, 2003; Lewis, 2004; Berkman and Reenock, 2004) and are the second most common quantitative analysis techniques among the articles reviewed after binary logistic or probit regressions of the probability of agency termination or survival, as in Bertelli and Sinclair (2018). Figure 3 shows the frequencies of different types of quantitative analysis, whereas Figure 4 provides a timeline of the distribution of research methods and displays the progressive temporal evolution toward quantitative analysis.

Insert Figures 3 and 4 about here.

None of the more than 120 reviewed articles used a mixed methods approach. A Google Scholar search for the keywords “*mixed methods*” or “*mixed methods*” + “*reorganization*”; “*amalgamation*” or “*termination*” in June 2022 did not yield any results in line with the criteria of this review. Their seemingly nonexistent application to the study of the reorganization of public

agencies seems surprising, given that mixed methods are increasingly being used in public management to overcome the limitations of either qualitative-only or quantitative-only research (Hendren et al., 2018; Mele and Belardinelli, 2019). This leaves grounds to believe that the combination of quantitative and qualitative methods might help solve some inconsistencies in the definitions and identification of the determinants that emerged from the previous sections.

Finally, Table A.5 in the Appendix summarises the reform content and geographical coverage of the case study research included in this review. It seems striking that the vast majority of the empirical settings are high-income and fully developed countries, with the dominance of the US, the UK, and European countries. However, several contributions in the recent years have been setting the stage for fruitful research on the public administration of developing countries, e.g., for what pertains to topics of organizational performance, policy implementation, innovation in the public sector, decentralization, and civil service reform (Bertelli et al., 2020; Rasul et al., 2021; Williams and Yecalo-Teclé, 2020; McCourt, 2018; Zarychta et al., 2020). Thus, the discussion on reorganization could greatly benefit from expanding its geographical focus in this direction to overcome the perceived developed country bias.

Discussion

The question of what public sector reorganization is and why it happens has not been given a satisfactory answer in the literature on public management and administration. A review of over 120 scholarly contributions in the past half-century revealed that several inconsistencies and puzzling aspects remain.

There does not seem to be an agreement on the conceptual links between reorganization and termination, as several scholars over the past decades have either considered them as distinct phenomena, as the latter as a (possible) implication or consequence of the former, or as overlapping concepts. Similarly, it has been assumed that reorganization was motivated by several distinct drivers, yet there is evidence that efficiency-driven or managerial motivations often mask political reasons. Finally, there is a lack of consensus on the very definition of the term ‘organization’, as its boundaries concerning policies, programs, and functions are not always agreed upon.

These inconsistencies might be due to the empirical approaches used so far, which rely on case studies or quantitative-only or qualitative-only methodologies. The use of mixed methods appears to be a promising avenue for further research to obtain a more precise conceptualization of reorganization and a better understanding of its drivers (Varriale, 2022; Kirley and Varriale, 2022). Definitions of reorganization implying the termination of each single merging agency can be in contrast with subjective perceptions of the involved staff of the persistence of pre-existing entities, just as definitions implying mergers of equals can be in contrast with subjective perceptions of absorption. In addition, if empirical research can point to some of the factors

increasing the likelihood of reorganization, qualitative research is needed to grasp the mechanisms behind it. A deeper understanding of the definition and determinants of reorganization might also benefit from more complementarity and dialogue between public administration and other disciplines, mostly political science and organizational theory, which have been studying the same or very similar issues from different angles (Moe, 1990; 1991).

Finally, recent years have witnessed a trend of focusing on empirical analyses of single-country case studies, which can uncover relationships with high internal validity, yet often limited generalizability and external validity. Patterns and trajectories of reorganization might be very different, even in similar contexts, as they are highly dependent on the institutional, socioeconomic, environmental, constitutional, and political legacy of a country, which affects the structure of its public bureaucracies (Cheung, 2005; Yesilkagit and De Vries, 2004). Thus, it could be advisable to take inspiration from cross-country comparisons that were in vogue in the past century (Wright, 1994; Schwartz, 1994; O'Leary, 1987), perhaps using more recent research methodologies, as done by Ryu et al. (2020), and expanding the focus to developing and/or low and middle-income countries, where topics of reorganization have been understudied to date, yet there seem to be promising grounds for research (Bertelli et al., 2020).

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Tables and figures

Figure 1: Publication years of articles included in the review

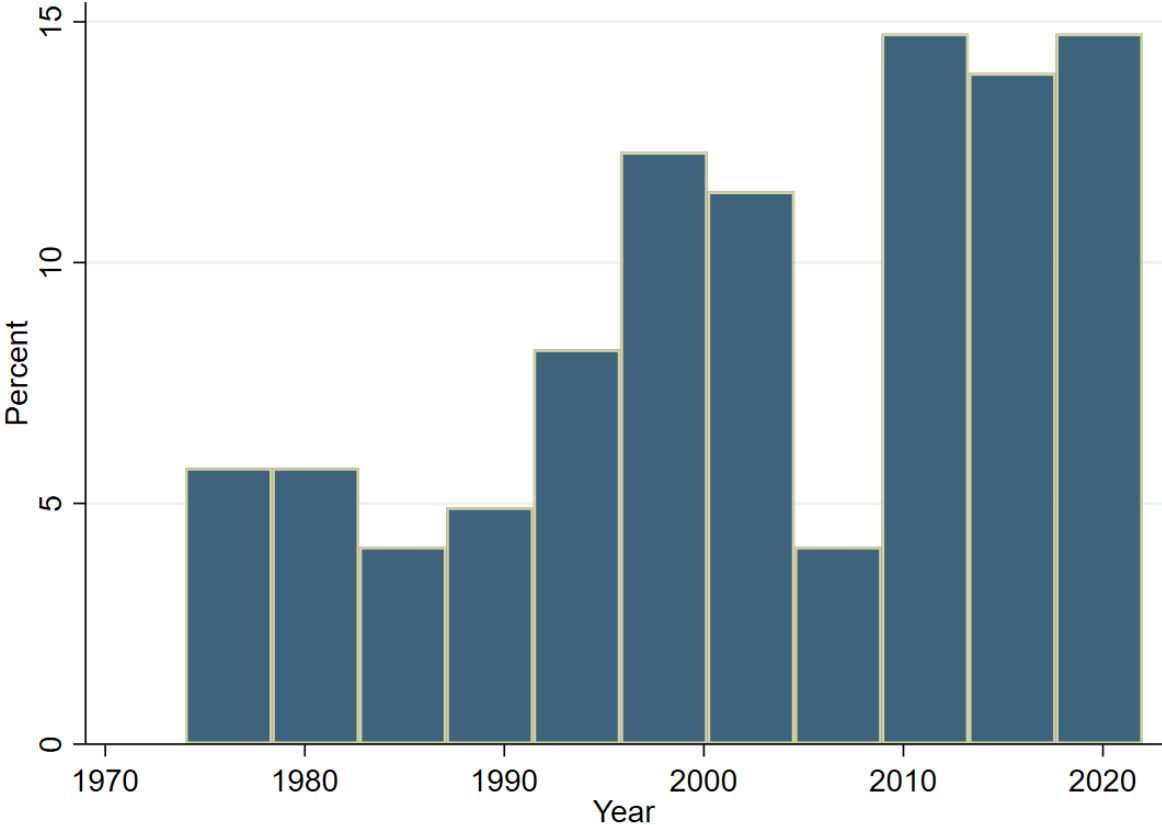


Figure 2: PRISMA diagram of the review process

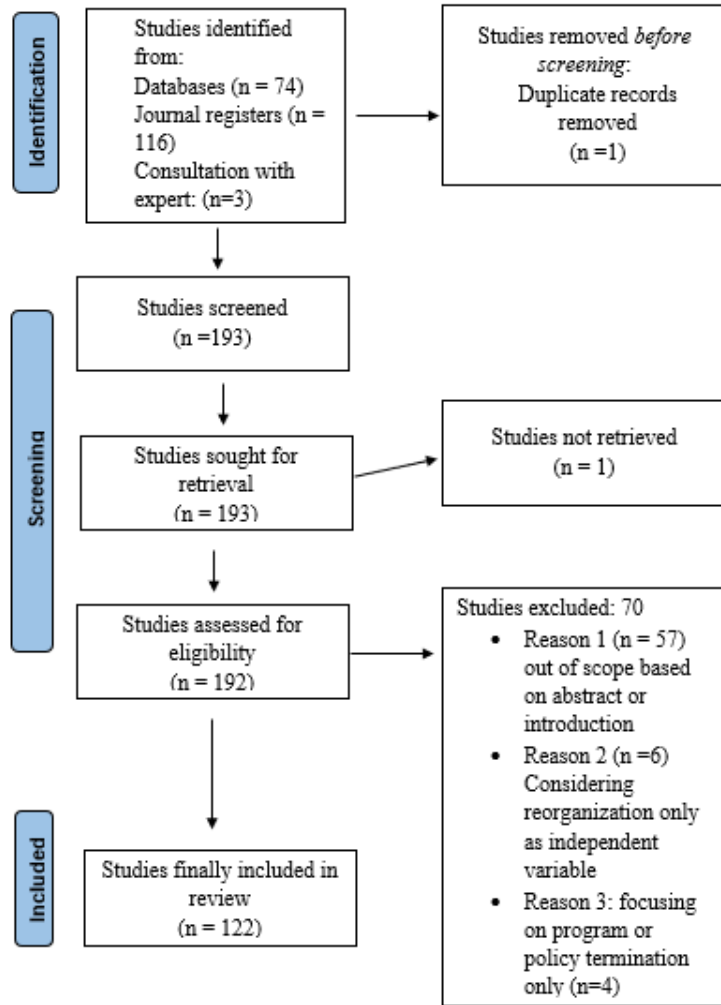


Table 1: Classifications of explanations for reorganization

Reorganization \neq Termination	Reorganization \subset / \rightarrow Termination		Reorganization \approx Termination
Thomas (1993)	Grafton (1979)	Ryu et al. (2020)	Rolland and Roness (2011)
Daniels (2001)	Chackerian (1996)	Berkman and Reenock (2004)	MacCartaigh (2012)
Geva-May (2001)	Warner and Hebdon (2001)	James et al. (2016)	MacCartaigh and Roness (2012)
O’Leary (2015)	Bertelli and Sinclair (2018)	DeLeon (1978)	Nakrošis and Budraitis (2012)

Figure 3: Distribution of quantitative methods

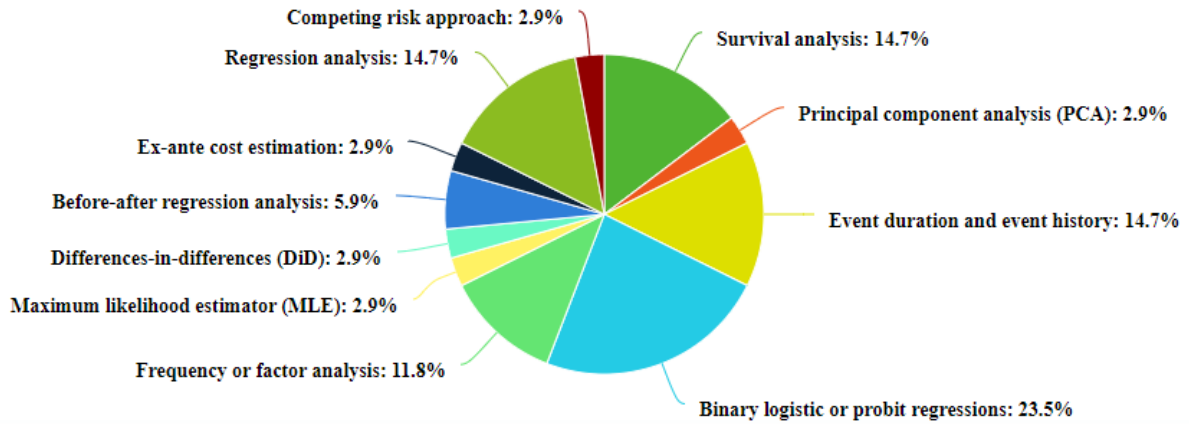
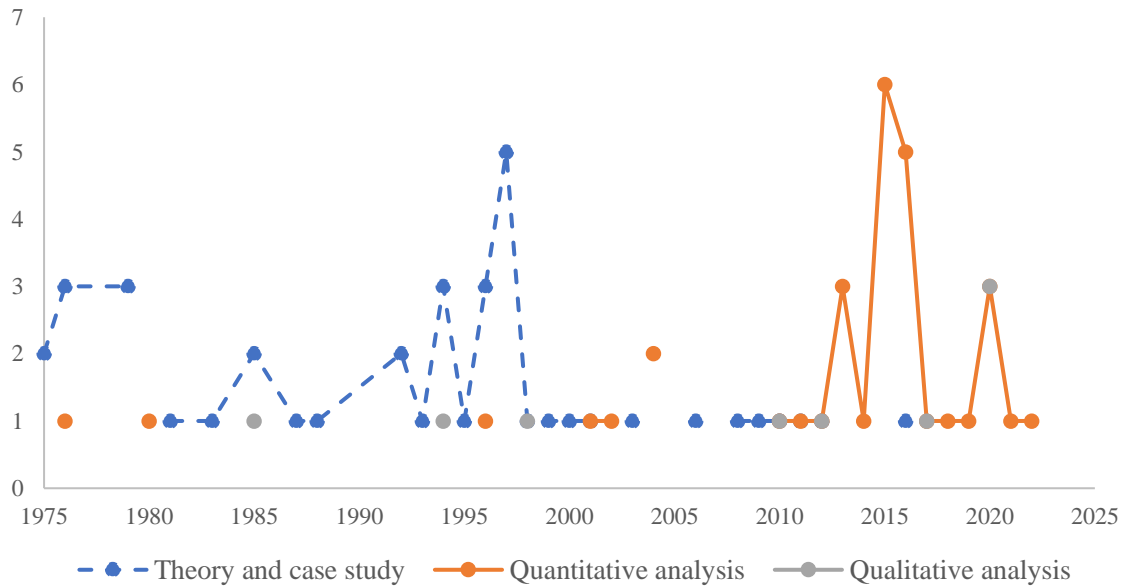


Figure 4: Chronological evolution of research methods



Appendix

Table A.1: Efficiency explanations

Article	Category	Explanation(s) or driver(s)
Arnold (1974)	Efficiency	Efficiency explanations and bureaucratic politics
Grafton (1979)	Efficiency	Rationalization of resources
Boyle (1979)	Efficiency	Efficiency explanations
Mwape (1980)	Efficiency	Functionalism targeted at scale economies
March and Olson (1983)	Efficiency	Efficiency explanations and rationalization of resources
Derksen (1988)	Efficiency	Efficiency explanations and rationalization of resources
Boyne (1992)	Efficiency	Economies of scale and scope
Thomas (1993)	Efficiency	Efficiency explanations and economies of scope
Freeman and Moran (2000)	Efficiency	Fiscal/financial imperatives; competitive effects
Warner and Hebdon (2001)	Efficiency	Efficiency explanations, response to fiscal stress
Fleurke and Hulst (2006)	Efficiency	Public scrutiny and competitive effects
Leach (2009)	Efficiency	Economies of scale
Alba and Navarro (2011)	Efficiency	Fiscal austerity, budget cutting, fighting corruption
Ruggiero et al. (2012)	Efficiency	Higher quality of public services at a lower cost, economies of scale, and scope

Andrews (2013)	Efficiency	Efficiency-enhancing competition and economies of scale
Hanes (2015)	Efficiency	Economies of scale
Blom-Hansen et al. (2016)	Efficiency	Efficiency
Drew et al (2016)	Efficiency	Economies of scale
Kortt et al (2016)	Efficiency	Economies of scale
Steiner et al. (2016)	Efficiency	Economies of scale
Rosenfeld and Reese (2016)	Efficiency	Cost savings
Drew et al. (2017)	Efficiency	Cost savings and economies of scale
Garlatti et al. (2020)	Efficiency	Economies of scale
Whitford (2021)	Efficiency	Efficiency
Blom-Hansen et al. (2021)	Efficiency	Economic potential, economies of scale

Table A.2: Political explanations

Article	Category	Explanation(s) or driver(s)
Arnold (1974)	Political	Bureaucratic politics
Rhodes (1974)	Political	Increase control from the central government to local government
Jennings (1975)	Political	Party control of local governments
Behn (1976)	Political	Political support and clientelism/bureaucratic politics
Grafton (1979)	Political	'Turf fights' among public administrators
Boyle (1979)	Political	Bureaucratic politics
Garnett and Levine (1980)	Political	Political competition
Salamon (1981)	Political	Tactical advantage
March and Olson (1983)	Political	Bureaucratic politics and political turnover
Owens (1985)	Political	Political reasons (responsibility/accountability and blame management)
Radcliffe (1985)	Political	Bureaucratic politics
O'Leary (1987)	Political	Class struggles, political ideologies, party competition, bureaucratic and symbolic politics
Boyne (1992)	Political	Public scrutiny and competitive effects
Thomas (1993)	Political	Political efficacy, public trust and confidence; political accountability and control;
Davies and Rose (1988)	Political	Symbolic reshuffling

Schwartz (1994)	Political	Power and control by politicians
Wright (1994)	Political	Reforms induced by political forces; democratization
Stewart and Stoker (1995)	Political	Control and local (democratic/political) accountability
Balla (1998)	Political	Political control of the agency
Chackerian (1996)	Political	Co-partisanship, political competition
Norris-Tirrell (1997)	Political	Shifts in political ideology
Christensen (1997)	Political	Efficiency, democracy, and public interest. Also a contrast between ideologically motivated reforms and civil servants' interests
Knill (1999)	Political	Political and institutional veto points versus external pressures for reform
Chisholm (2000)	Political	Reforms induced by political forces and special interest groups
Freeman and Moran (2000)	Political	Bureaucratic politics
Christensen and Pallesen (2001)	Political	Delegation of authority and allocation of costs and benefits among actors
Daniels (2001)	Political	Political environment; ideological constraints
Geva-May (2001)	Political	Political conflicts, politicians' reluctance to damage an existing program, political incentives
Warner and Hebdon (2001)	Political	Political and trade union considerations and interests
Howell and Lewis (2002)	Political	Political control of the agency

Lewis (2002)	Political	Competition among agencies, political opposition, insulation from presidential control
Painter (2004)	Political	Political, bureaucratic, and societal actors and types of bureaucracy
Cheung (2005)	Political	NPM and political explanations - e.g. patronage
Fleurke and Hulst (2006)	Political	Increase local democracy and accountability
Adam et al. (2007)	Political	Political turnover
Otenyo (2008)	Political	Bureaucratic politics
Leach (2009)	Political	Local democracy (political/accountability argument)
Andrews (2013)	Political	Favor political coordination and local accountability
Mortensen (2013)	Political	Blame avoidance
Bertelli et al. (2015)	Political	Media attention, public information, accountability
O'Leary (2015)	Political	Political turnover
James et al. (2016)	Political	Changes in political power, co-partisanship
GreLHAey and Hanretty (2016)	Political	Government debt and left-wing coalitions
Steiner et al. (2016)	Political	Local autonomy and democracy
Swianiewicz (2018)	Political	Forces for local democracy
Götz et al. (2018)	Political	Political and ideological determinants
Bertelli and Sinclair (2018)	Political	Accountability, ideological agreement, blame-shifting,

		transparency
Kuipers et al. (2018)	Political	Political control
Chen et al. (2019)	Political	Political turnover and salience
Ryu et al. (2020)	Political	The political system, political turnover, and electoral cycles
Garlatti et al. (2020)	Political	Enhanced citizens' capacity (participation, democratic accountability, and identity)
Lichtmanegger and Tobias (2020)	Political	Political motives, political priorities
Yesilkagit (2021)	Political	Political (turnover, ideology, insulation)
Whitford (2021)	Political	Party control, reshaping public perceptions of parties
Camões and Rodrigues (2021)	Political	Political transaction costs; probability of reelection
Blom-Hansen et al. (2021)	Political	Democratic potential
Fleischer et al. (2022)	Political	Ideological shifts; political turnover; political ideology; distance from the executive

Table A.3: Managerial explanations

Article	Category	Explanation(s) or driver(s)
Derksen (1988)	Managerial	Larger administrative capacity
Aucoin (1990)	Managerial	Public choice theory, managerialism
Thomas (1993)	Managerial	Enhance effectiveness and professional autonomy within the organization
Schwartz (1994), Wright (1994)	Managerial	Increase competitive pressure on the public sector and learn from the private sector; management for results (output-oriented NPM theories)
Warner and Hebdon (2001)	Managerial	Information and service quality
Fleurke and Hulst (2006)	Managerial	Better tailoring of local service
O' Leary (2015)	Managerial	Managerial rationality
Steiner et al. (2016)	Managerial	Improvement in the quality of services
Lichtmannegger and Tobias (2020)	Managerial	Administrative challenges of lack of efficiency and coordination
Blom-Hansen et al. (2021)	Managerial	Effectiveness and quality of local service

Table A.4: Explanations based on organizational landscape and reaction to external forces

Article	Category	Explanation(s) or driver(s)
Grafton (1979)	External forces	Diffused innovation
Garnett and Levine (1980)	External forces	Diffused innovation; adaptation to modernization
March and Olson (1983)	Population ecology	Garbage can model
Kjellberg (1985)	External forces	Welfare state development
Brans (1992)	External forces	Welfare state development; urbanization
Schwartz (1994)	External forces	Crises and change - international economic shocks
Wright (1994)	External forces	Adaptation to modernization
Della Cananea (1996)	External forces	Crisis of the state
Leach (2009)	External forces	Rationalism
Norris-Tirrell (1997)	External forces	Changes in behavioral theory; rationalism
Boyne (1992)	External forces	Public choice theory
Frantz (1992)	Population ecology	Luck of survival
Chackerian (1996)	Population ecology	Environmental determinants (cyclical patterns of economic growth vs crises)
Chisholm (2000)	External forces	Public choice theory
Daniels (2001)	Population ecology	Organizational characteristics
Lewis (2002)	Population ecology	Agency failure
Berkman and Reenock (2004)	External forces	Economic changes (growth or crises)

Fleurke and Hulst (2006)	External forces	The complexity of large governments
Adam et al. (2007)	Population ecology	Adaptation and chance; organizational characteristics
Boin et al. (2010)	Population ecology	Organizational characteristics and environmental dynamics
Alba and Navarro (2011)	External forces	Process of political decentralization and forces to become a member of the EU
Bhatti and Hansen (2011)	Population ecology	Societal connectedness; economic and political homogeneity and population size
Nakrošis and Budraitis (2012)	External forces	The transition from communism to the market economy, Europeanization, economic crises, political turnover
MacCarthaigh and Roness (2012)	Population ecology	Chance, learning, and organizational characteristics
Park (2013)	Population ecology	Adaptive capacity
O’Leary (2015)	Population ecology	Organizational characteristics (agency size and type)
GreLHAey and Hanretty (2016)	External forces	
Corbett and Howard (2017)	Population ecology	Organizational characteristics (agency size)
Götz et al. (2018)	Population ecology	Socio-economic environment (external forces)
Van Witteloostuijn et al. (2018)	Population ecology	Density theory
Kuipers et al. (2018)	Population ecology	Adaptation to external force
Lichtmannegger and Tobias	Population ecology	

(2020)

Table A.5: Overview of the settings of case studies

Paper	Setting	Reorganization reform(s)	Period
Arnold (1974)	The US	Hoover's reorganization reforms	The 1920s
Rhodes (1974)	England	Local Government Act	1972
Jenning (1975)	England	Reorganization of local authority policymaking in education	The 1970s
Ashford (1976)	England	Local Government Act	1972
Behn (1976)	The US	Closure of Massachusetts public training schools	1969-1973
Grafton (1979)	The US	Federal agency reorganization reforms	1934-1976
Mwape (1980)	Zambia	Amalgamation/grouping of ministries with similar functions	1979
Brans (1992)	Belgium	Local government reorganization in Belgium	1830-1983

		Several reorganization reforms in the US (e.g. Brownlow Committee, 1937; First Hoover Commission (1949), Carter Reorganization Project	
Salamon (1981)	The US	(1978)	1937-1978
March and Olson (1983)	The US	Comprehensive administrative reorganization	1904-1980
Owens (1985)	The US	Reorganization of DHR (Department of Human Resources) in Florida, Massachusetts, Washington, Utah, Kentucky, and Louisiana	
O'Leary (1987)	The UK and France	Reorganization of the cities of London and Paris	1957-1986
Derksen (1988)	The Netherlands	Local Government Reform in the Netherlands	The 1960s- 1980s
Davies and Rose (1988)	The UK	Program expenditure and organizational change in i) health and social security and ii) trade and industry	1945-1985
Aucoin (1990)	Britain, Australia, New Zealand	Decentralization, deregulation, delegation	

Boyne (1992)	The UK and USA	Comparison of reorganization reforms in the UK vs the USA	The 1980s
Frantz (1992)	The US	U.S. Hansen's Disease policy	1920s-40s
Schwartz (1994)	New Zealand, Australia, Denmark and Sweden	Reorganization reforms	1980's
Wright (1994)	Western Europe	Reorganization reforms	The 1980s
Stewart and Stoker (1995)	The UK	Fifteen years of local government reorganization reforms	1979-1994
Della Cananea (1996)	Italy	Administrative reforms under the Ciampi government	1992-1996
Leach (1997)	England	Local government reorganization reforms	From 1957 to 199
Norris- Tirrel (1997)	The US	Children's rehabilitation services (CRS), a non-for- profit organization	From the 1960s to the early 1990s

Norris (1997)	UK and US	Four big waves of reforms in the UK and three in the US	1850-1980
Boyne (1997)	Scotland and Wales	Reorganization and amalgamation of regions and districts	1974
Christensen (1997)	Denmark	Administrative reforms and changes	
Knill (1999)	Germany and UK	Administrative reforms and changes	
Freeman (2000)	Britain, Sweden, France, Germany, and Italy	Public healthcare reforms	The 1990s
Painter (2004)	Malaysia, Singapore, Thailand, Taiwan	Administrative reforms and changes	Approximately 1950's- the 2000s
Yesilkagit and De Vries (2004)	New Zealand and The Netherlands	Public management reforms of financial management, personnel management and organizational reform	1980's-the 2000s
Cheung (2005)	Asia	Administrative reforms and changes	1990s

Essay 2: Merging public health agencies: A mixed methods analysis

Efficiency is traditionally among the most frequent explanations for the administrative reorganization of local governments and public agencies. Structural consolidation, including mergers of two or more similarly sized organizations into a newly created one, or amalgamations of one or several smaller organizations into a bigger pre-existing one, is expected to bring cost savings and scale economies in public service delivery. This private sector-inspired belief has led to numerous reforms in Europe over the past decades (Swianiewicz, 2018), mostly driven by the New Public Management doctrine and its imperatives to improve the ‘three Es’ of Economy, Efficiency, and Effectiveness of public services (Cole and Eyméri-Douzans, 2010; Kitchener and Gask, 2003).

However, organizational changes in the public sphere are led by political and ideological goals, in addition to economic objectives (Lewis, 2002; Ryu et al., 2020; Varriale, 2022). The focus on learning from the private sector has thus caused an under-investigation of some important consequences of reorganization, for instance, how it impacts the different actors in the electoral accountability process (Bertelli and Sinclair, 2018) and whether accountability outcomes can create trade-offs with the efficiency imperative. From the perspective of the politicians enacting them, strengthening their political accountability is among the ultimate goals of reorganization reforms. This outcome can be reached through improved efficiency and better public service delivery resulting from reinforcing the accountability of public sector workers (Christensen and Læg Reid, 2015). However, mergers might, in some cases, decrease local democracy and citizens’ participation (Steiner et al., 2016; Steiner and Kaiser, 2016), which negatively affects democratic accountability (Garlatti et al., 2020).

The impact of certain types of reorganization reforms, such as fiscal decentralization, on (local) government accountability has been extensively studied (Persson and Tabellini, 1994; Mazza and Winden, 2002; Mills, 1994), whereas there has been less research on other types of reorganization, such as mergers and amalgamations (Kenk and Haldma, 2019; Andrews, 2013; Leach, 2009). Government municipalities and local public agencies, including those operating in the field of healthcare, are frequent targets of these reforms, and countless empirical studies have attempted to assess the effects of consolidation on the number of public health agencies. However, the reasons why the expected outcomes are (or are not) achieved generally cannot be grasped by quantitative research alone. Qualitative analysis is needed to increase an understanding of the mechanisms underlying the evidence observed, to make sense of apparent paradoxes, and to improve quantitative methodologies (Hendren et al., 2018).

Do mergers of public agencies bring financial improvements and/or better service provision?

What are the managerial explanations underlying the positive or negative performance outcomes?

This article combines quantitative and qualitative evidence to answer these questions in a convergent framework (Pluye and Hong, 2014). The two methods are complementary during data collection and analysis, as the quantitative analysis uncovers macro evidence but fails to provide a molecular explanation of the mechanisms underlying the need for qualitative analysis.

Evidence is provided from a wave of merger reforms of Italian Local Health Agencies (LHAs) in the years 2011-2017. The quantitative methodology assesses the impact of mergers on different types of expenditures, as well as on the quality of care, using a staggered differences-in-differences (DiD) analysis at the agency level, where never-merged and not-yet-merged LHA across Italian regions are the counterfactual group for merging ones. The qualitative research design derives evidence from semi-structured interviews with 20 LHA directors at different hierarchical levels to

i) confirm the validity of performance indicators used in the quantitative phase, ii) investigate the molecular mechanisms behind the quantitative results, and iii) understand if they were driven by organizational or managerial accountability explanations.

Quantitative results show no evidence of cost savings in post-merger public health agencies as opposed to never-merging or not-yet-merged ones, and possibly a deterioration of health care service provision and quality as proxied by an increase of hospital mortality and avoidable hospitalizations (AHs), which is especially noticeable one year from the merger, and signals potential pitfalls in outpatient care.

The qualitative interviews revealed several candidate explanations for the lack of scale efficiency. The reduction of some of the fixed costs might be counterbalanced by the increased financial effort for coordination and monitoring the performance of inhomogeneous pre-merger systems and for adaptation to the new agency, including adjusting headquarters and physical facilities and bargaining for staff salaries. The lack of cost savings in administrative staff might be due to the strong rigidities of public sector employment in terms of firing, whereas the lack of cost savings in the purchase of medical and non-medical goods might be due to pre-existing agreements for joint tender procedures. More generally, mergers can, in some cases, be the official formalization of previous informal collaboration histories so that no additional gain from the actual merger is observed. Conversely, scale economies may take several years to emerge, and thus not be evident for mergers that happened five to eight years before this study.

This study thus makes a twofold contribution to the literature. It expands the existing research with causal evidence on the financial and non-financial outcomes of mergers, the latter being under-investigated in merger evaluation research, and it complements the quantitative part with

qualitative evidence to understand the mechanisms behind the observed results, an important step that empirical studies often neglect.

Literature review

Reorganization, accountability, and performance

Structural consolidation reforms can alter accountability in a way that affects both actual performance and the way performance-related information is channeled from lower-level bureaucrats to managers, then politicians, and thus conveyed to citizens, who will use it for evaluation and sanctioning purposes (Christensen and Læg Reid, 2015; Bertelli, 2021). Most importantly, reorganization might affect what information is used to measure performance, especially when its definition is ambiguous.

Evaluation analyses of public agencies' reorganization generally focus on two main typologies of outcome variables: those related to cost savings and those proxying to the quality of public service provided. However, the definition of performance and performance-related information to be adopted is often controversial (Nielsen and Baekgaard, 2015). It is also not uncommon that different types of performance indicators are in contradiction, and thus, local government reforms can result in trade-offs between quality and efficiency (Lo Storto, 2016). Citizens, politicians, and managers also tend to value financial and non-financial information differently (Liguori et al., 2012; Olsen, 2017).

The lack of common agreement on performance definition and measurement can thus negatively impact the political accountability of elected officials to their citizens, as well as the managerial accountability of appointed professionals to politicians. Indeed, politicians and public managers might emphasize promising indicators more than unfavorable ones, which is likely to hinder accountability and create moral hazard problems in a principal–agent fashion, since principals are not given objective information to evaluate the former, the agents. This can affect both the

managerial accountability of managers as actors on behalf of politicians and the electoral accountability of politicians as actors on behalf of citizens.

Italian public health agencies constitute a good example of the importance of defining and assessing performance following reorganization reforms. Indeed, the director generals of Italian LHA are appointed from a national list of experienced managers by regional politicians to whom they are accountable and who can terminate their contract if their performance falls short. Therefore, DGs might have incentives to emphasize certain (favorable) post-merger indicators more than others, and this moral hazard problem becomes exacerbated in the case of goal ambiguity vis-à-vis the political sphere (Calciolari et al., 2011).

Local government and agency reforms increasing agency size, concentration, and vertical-horizontal relationships are expected to complicate the problem of performance evaluation and cause a trade-off between efficiency and accountability (Fimreite and Læg Reid, 2009), or lower the incentives to improve overall performance by providing involved actors with incentives to engage in blame avoidance (Nielsen and Baekgaard, 2015; Bringselius, 2012). The remainder of this section will review evaluation studies of merger reforms of local governments or agencies that assessed the impact on either financial or non-financial performance outcomes (or a combination) and used either quantitative or qualitative methods (or a combination).

Quantitative evaluations of local government mergers

Table 1 summarises a review of the literature on the proposed outcomes of public sector mergers published in the years 1990-2022. For the scope of this article, the review is limited to European studies and those assessing the issue from the disciplinary angles of public administration, political science, and public policy. The most frequent financial outcomes include the reduction of

expenditures and the creation of scale economies, which refer to decreasing costs per capita by spreading fixed costs in a larger population (Bikker and Van der Linde, 2016). Among the non-financial outcomes, we found political trust and satisfaction, which are directly linked to democratic accountability, political participation, and voter turnout. Among non-political and non-financial outcomes, we found public service performance and quality to be directly linked to a managerial and professional capacity. Scale effects can also be pursued in service provision with increased quality and administrative effectiveness (Boyne, 1996).

Insert Table 1 around here

Until the last couple of decades, evaluation studies of public mergers in Europe assessing their impact on non-financial outcomes have been scant, and this was likely caused by the difficulty of identifying valid measures for the quality of services offered by local public administrations and local agencies. In the case of Switzerland, Steiner and Kaiser (2016) used this technique to assess the effects of a wave of municipal mergers that happened between 1998 and 2009 on public service delivery, staff professionalization, local government autonomy, and local democracy, finding a positive effect on all but the latter outcome. This confirms previous nonexperimental evidence from Steiner (2003).

Indicators of the financial performance of local governments and public agencies are generally more easily available and objective, leading to extensive work in this field of research. However, most of these studies only demonstrated correlations and were not based on a strong counterfactual methodology. Among the few exceptions providing causal evidence, Blom-Hansen et al. (2014) analyzed the effects of a Danish reform in 2007 that amalgamated all municipalities with populations under a certain threshold of inhabitants using a DiD design, finding a decrease in

administrative costs per capita. However, Blom-Hansen et al. (2016) highlighted a general null effect of Danish municipal mergers for what pertains to municipal spending in eight policy areas. If anything, an overspending phenomenon can be observed in the period immediately following the mergers because of the free-riding incentives that arise from the common pool of future joining municipalities (Askim, 2020). Hansen (2014b, 2019). This opportunistic behavior, which uncovers the lower perceived accountability of managers during municipal mergers and possibly weighs off the cost savings of the post-merger phase, is also observed in the case of Danish municipalities (Hansen, 2014b; Hansen, 2019).

Blom-Hansen et al. (2021) attempted to bridge the efficiency and quality outcome analysis. However, they found no effect of the Danish municipal mergers on the effectiveness of scale. On the other hand, these mergers seemed to have improved the capacity of top managers for external relations, especially with city mayors. In the case of Germany, Roesel (2017) and Blesse and Roesel (2019) found no effect of the county and district mergers on total costs or administrative expenditure and a negative effect on citizens' political participation. That municipal mergers might lead to a decrease in voter turnout is also confirmed in the setting of Finland (Lapointe and Tukiainen, 2018) and Austria (Heinisch et al., 2018), whereas in the Danish case, the effect seems ambiguous (Bhatti and Hansen, 2019).

Qualitative and mixed methods evidence in merger analysis

When approaching a new research domain, qualitative analysis can be useful for obtaining exploratory insights into possible relationships, which can then be investigated more deeply with quantitative analysis. For instance, Steiner (2003) conducted expert interviews with mayors and municipal officers to understand the perceived outcomes of Swiss municipal mergers in terms of

the quality of public service offered, cost savings, and local participation. The results were then confirmed with quantitative evidence (Steiner and Kaiser, 2016). Qualitative analysis of the mergers of public government and agencies can also be used in a complementary way to investigate those aspects that quantitative evidence fails to grasp. These include understanding mechanisms, causes, and consequences (Ruggiero et al., 2012; Elcock et al., 2010) or assessing their impact on the affected staff (Gauld, 2003).

Kenk and Haldma (2019), for instance, used qualitative analysis of documents and interviews with politicians and officials participating in the mergers of local governments in Estonia to understand whether the reforms led to changes in the use of performance information. In the context of NHS trust mergers in England, Fulop et al. (2002, 2005) used semi-structured interviews with health authority representatives to understand the unstated drivers of the reforms, which include mechanisms related to politics, lobbying, and accountability. Hutchings et al. (2003) analyzed four case studies based on the wave of NHS trust mergers of the late 1990s to understand their impact in terms of cost savings and accountability of involved managers.

Mixed methods are thus increasingly used in public management and public health research to overcome the limits of qualitative or quantitative-only research (Hendren et al., 2018; Pluye and Hong, 2014; Mele and Belardinelli, 2019; Tariq and Woodman, 2013). The main goals of using mixed methods include initiation, development, expansion, complementarity, and triangulation of the results from quantitative and qualitative analysis (Greene et al., 1989; Tariq and Woodman, 2013; Hendren et al., 2018). However, despite their potential for explaining the causes and consequences of these reforms, the application of mixed methods in the analysis of local government and agency mergers remains limited, especially in the case of public health agencies. Among the few exceptions, Ahgren (2008) combined survey data and semi-structured interviews

to assess the effects of mergers of Swedish public hospitals on the quality of public care and total costs and the limited effects for both outcomes were confirmed across the two methodologies. Ovseiko et al. (2015) and Maile et al. (2022) combined quantitative analysis of clinical and financial indicators and survey experimental data with qualitative analysis of semi-structured interviews to analyze the changes in organizational culture following a later wave of NHS trust mergers in the UK.

Figure 1 illustrates the rationale behind the use of mixed methods in this article. The quantitative analysis enables eliciting the effects of the mergers on observable measures of financial and quality performance, whereas the qualitative component enables understanding of the mechanisms behind the numeric results, for example, concerning the use of performance information or the prioritization of certain indicators over others.

Insert Figure 1 around here

Empirical setting

Italian ASL (“Azienda Sanitaria Locale”, thus Local Health Agencies – LHAs in English) are public health organizations that oversee the administration, financing, and organization of public health care in Italy. Their institution dates back to a massive decentralization reform of the Italian health system in 1978, whereas their modern status as independent legal entities with respect to the Region with organizational, managerial, technical, and financial autonomy was defined in 1993 (Maino, 1991). If public health in Italy is indeed organized at the regional level with Regional Health Systems (RHS), it is worth mentioning that municipal politicians traditionally maintain a certain degree of interference and authority (Vampa, 2016; Ranade, 1995; Dent, 2005; Sarto et al., 2019).

At the local level, LHAs deliver public health services, preventive medicine, primary and secondary care, and commission healthcare from independent providers (Ferré et al., 2014).

Whereas in this essay we adopt the terminology ASL which is the most generic one for the sake of uniformity, almost every Region has adopted specific acronyms, partially reflecting their different organizational model in terms of integration versus separation between the local agencies and public regional hospitals (Di Novi et al., 2018). The hierarchical pyramid of Italian LHAs is composed of the Director General, appointed by the Region, and of a medical and an administrative director who manage the agency together with a supervisory board, a clinical board, and a managerial board. Each LHA is organized in several geographical districts which are composed of Complex Structures (“Strutture Complesse”) broadly corresponding to clinical areas/disciplines of care. Director Generals are appointed by the Regional Council with a private performance-based contract, and they appoint administrative and medical directors (Stolfi and Hallerberg, 2016; Toth, 2014). This creates high political influence in the organization and

management of LHA and of the Italian NHS system as a whole, as the relationship between politics and public sector managers takes the form of a principal-agent model (Ballardini and Fabbri, 2011). However, General Directors maintain a certain degree of autonomy from politics in decisions concerning LHA (re)organization and staff allocation.

Political-managerial coordination problems in the NHS have led to conflicting objectives, such as maintaining local employment in the public sector vs. improving financial performance and efficiency of resource allocation (Ballardini and Fabbri, 2011; Alesina et al., 2001). Regional politics might demand one or the other depending on the type of campaigning and electoral cycle, and managers have to respond accordingly. Moreover, mergers in the Italian NHS have been traditionally advocated by Centre-left parties, in line with the experience of other European countries.⁶

From the end of the 1990s, structural reorganization reforms in the regional health systems in the form of mergers caused the number of LHA to decrease from more than 600 in 1992 to only 101 in 2019 (Di Novi et al., 2018). The stated objectives included an attempt to reach economies of scale and scope, rationalize services, reduce overcapacity, and improve clinical service quality. Table A.1 in the Appendix summarises the reorganization reforms that happened in the past two decades, which affected at different moments and to different degrees all of the twenty Italian Regions but three (Sicily, Liguria, and Valle d’Aosta).

⁶ This is reported also by several press news, e.g: www.quotidianosanita.it/lazio/articolo.php?articolo_id=30198

<https://radiogold.it/politica/131112-fusione-aso-LHA-infiamma-dibattito-politico/>

www.casalenews.it/politica/fusione-tra-LHA-al-e-aso-no-alla-proposta-indecete-del-pd-33608.html

<https://www.lagazzettadelmezzogiorno.it/news/home/60398/puglia-secondo-vendola-positivo-1-accorpamento-LHA.html>

Data and methods

Quantitative data

The empirical analysis of this article is centered on the LHA mergers that occurred between 2011 and 2017. The Appendix reports the full list of sources of empirical data and a summary of the merger processes, as well as their implications for the population size of each LHA (Table A.1). The empirical setup calculates the effects of mergers on financial performance and health service provision using a staggered DiD identification strategy that compares merged and non-merged LHA across regions before and after the mergers, as expressed in Equation 1.

$$Y_{i,t} = \alpha_0 + \alpha_1 \text{Merged}_{i,t} + \alpha_2 \text{Time}_{i,t} + \alpha_3 \text{Merged} * \text{Time}_{i,t} + u_{i,t} \quad (1)$$

The outcome variables $Y_{i,t}$ consist of measures of financial performance or quality of care. Financial performance is measured by the costs taken from agencies' balance sheets, such as costs for medical goods and services, costs for personnel, and DRG (Diagnosis Related Groups) reimbursement tariffs for ordinary and daily hospitalizations. This data can be publicly retrieved from the Health Ministry and the Ministry of Economics and Finance, and the links to the sources used are available in the Appendix. All variables were expressed as per capita values. Quality of care is measured by the number of hospital deaths and active patient mobility per capita, as well as avoidable hospitalizations (AHs). Allegri et al. (2022) calculated AHs as Ambulatory Care Sensitive Conditions (ACSC) from Italian hospital discharge sheets, following Pirani et al. (2006), who defined them as “*conditions susceptible to appropriate and timely prevention, management and control in an outpatient setting*” (p. 1, English translation from original in Italian). Therefore,

AHs are considered a signal of poor outpatient care, as in an effective prevention system, these conditions would be taken care of before reaching the hospital inpatient stage.

SDO data were obtained through a formal request to the Health Ministry (National Hospital Discharges, Ministry of Health, Planning Department). The staggered difference-in-difference estimator takes a value of 1 for those LHA that merged after the merger year, which was 2011, 2013, 2014, 2015, 2016, or 2017, and 0 for treated LHA before the mergers, as well as for those never affected by mergers in either year (counterfactual). To account for potential heterogeneity that might limit comparability of treated and counterfactual LHA, agency-fixed effects are included, and relevant socio-economic variables are controlled for in the models assessing financial performance. These include the total patient base of a LHA (reference population) and its total yearly revenues, its intra and extra-regional passive patient mobility, the regional share of people aged 65 and older, and total private consumers' expenditure for health services.

The total reference population and revenues of a LHA are direct proxies of its size, and the former is expected to have a positive impact on total LHA costs, analogously to the share of the elderly population. Patient mobility refers to the number of patients of a certain LHA/Region that decide to move to another LHA of the same Region (intra-regional mobility) or a LHA of another Region to receive health care treatment, whose cost is to be reimbursed by their Region of residence. It thus accrues to a cost (passive mobility) when analyzed on the balance sheets of the agencies in the Region of residence or to revenue when analyzed on the balance sheets of the agencies in the Region of hospitalization. Private out-of-pocket citizens' expenditure is also an important variable to be included as it can be a substitute for public health expenditure.

The triangulated evidence from the literature and the parallel qualitative analysis predicts that the costs more likely to be affected by the mergers are those for medical and non-medical goods due to better contractual power during public tendering, and the salaries of administrative staff due to the contraction in the number of administrative structures.

Qualitative data

The quantitative analysis of merger effects on indicators of financial and healthcare performance is complemented and supported by a complementary qualitative research design aimed at i) checking the appropriateness of the indicators chosen for the former analysis; ii) understanding the mechanisms driving the observed quantitative results; and iii) deepening the evaluation of the mergers to their impact on the accountability of the involved actors. Twenty managers belonging to the LHA who experienced administrative reorganization processes were remotely interviewed between December 2021 and July 2022. The project was audited by Bocconi's ethical committee and obtained approval on 22 December 2021.

The video or audio recordings of the semi-structured interviews were transcribed and theoretically coded using the qualitative data analysis software Atlas TI. The average duration of the interviews was 20-30 minutes, and the protocol (translated into English from the original in Italian) is available in the Appendix. The interviewees covered all the Regional Health Systems involved in reorganization processes between 2014 and 2017 and represented different hierarchical levels and functional areas. Eight interviewees were senior directors of the strategic apex of the LHA, with four DGs, three administrative directors, and one medical director. The remaining interviewees were eight middle managers, including three directors of quality control units and four directors of Struttura Complessa (Complex Structure), formerly known as "Primari". Eight interviewees were women.

Quantitative results

Effects on financial performance

Table 2 provides summary statistics of the cost indicators used in the analysis.⁷ The balance sheet sources corresponding to each item are reported in the Appendix. Passive mobility refers to the costs of sending residence patients to other agencies of the same Region (intra-region passive mobility) or agencies in other Regions (extra-region passive mobility).

Insert Table 2 around here

Table 3 shows that post-merger LHA did not lead to statistically significantly lower costs of medical or non-medical goods per inhabitant, either in the merger year (coefficient DiD) or one year after the merger (coefficient DiD t + 1). Qualitative interviews with LHA directors suggest that a possible reason for the lack of merger efficiencies is that, in many cases, pre-merger agencies already had centralized procurement systems often at the regional level, such as the “*Aree Vaste*” (Vast Areas) in Emilia Romagna and Tuscany. Therefore, the agency’s unification did not bring further cost savings in addition to those already created by these pre-merger contractual agreements. Otherwise, it could be the case that merger efficiencies may require several years to manifest. Other possible explanations for the lack of tangible savings are further investigated in the qualitative results Section.

Insert Table 3 around here

Table 4 also shows no evidence of merger efficiencies for the costs for total and administrative staff or directors. If anything, total staff salaries seem to increase in the merger year (Column 1).

⁷ Table A.4 in the Appendix provides logged values.

This result goes against the expectations from the previous literature and the qualitative analysis that merger efficiencies should be most pronounced in terms of administrative staff costs.

Insert Table 4 around here

Effects on service delivery

Table 5 provides a summary of the indicators for the quality of care used in the analysis.⁸The SDO items corresponding to each indicator are explained in the Appendix.

Insert Table 5 around here

Tables 6 and 7 show the results of the staggered DiD analysis on indicators of the number of hospitalizations, hospital mortality, active mobility, reimbursement costs, and avoidable hospitalizations (AHs), respectively, in the merger year (coefficient DiD, Table 6) and one year after the merger (coefficient DiD $t + 1$, Table 7).

In Table 6, the DiD coefficient of the merger impact is only significant for the indicator of active patient mobility. However, Table 7 shows that one year after reorganization post-merger agencies seem to have a higher incidence of urgent and avoidable hospitalizations (AHs) per capita, which might signal a lowering in the overall quality of care. DRG per capita reimbursements for daily and ordinary hospitalizations also seem to go up for merged agencies one year after the merger, whereas there is no effect on hospital mortality or active patient mobility. Table 8 excludes the Lombardy agencies from the sample, where the merger reforms were very different from the rest of the Italian regions. Indeed, LHAs were transformed into ATS, which retained only

⁸ Table A.4 in the Appendix provides logged values.

administrative and managerial functions and no longer delivered health services. Excluding Lombardy from the sample leads to significant and positive coefficients for the effects of mergers on per capita acute hospitalizations, as well as avoidable hospitalizations and hospital mortality in the merger year (DiD coefficient).

Insert Tables 6, 7, and 8 around here

Placebo checks

Table 9 shows the results of the placebo test, where the true years when mergers were implemented were randomly replaced with spurious years. The placebo DiD coefficient was never significant, supporting the validity of the main results.

Insert Table 9 around here

Parallel trends graphs

Figures 2 to 5 show graphical tests of the parallel trend assumptions for the staggered DiD analysis. We can observe a roughly similar and increasing trend in the cost of medical goods per capita and a decreasing trend in the cost of non-medical goods per capita. The trend in total staff costs is instead non-monotonic, as it experiences an increase in 2014, then a decrease in 2015 followed by yet another increase. SDO indicators seem to experience a more stable trend, apart from hospital mortality and avoidable hospitalizations that slightly decrease after 2016.

Insert Figures 2 to 5 around here.

Qualitative results

Table 10 summarises the results of the qualitative analysis of the semi-structured interviews which we discuss in this chapter.

Insert Table 10 around here

Effects on tasks, accountability, and information flow

Mergers generally brought about a reduction in the number of organizational structures, particularly in the administrative area, which should promote accountability and efficiency-enhancing competition among managers to remain in their positions. However, the mergers often caused radical changes in the flow of information. The merger of Lombardy in 2016 caused the most profound changes in this respect.

“There has been a tendency for ATS to incorporate several former LHA, as in our case [...], so the level of information sensibly changed inside and outside, as the integration work that we had to do on the two former agencies has been noteworthy and lasted several years.”

In many cases, the mergers had an impact on managerial accountability to municipal politicians, even more than to regional ones, as they changed the span between local politics and the LHA direction. As explained in the Empirical Setting Section, after the reform of 1978 the Region became the responsible political actor for health care management, but municipal politicians often managed to retain a certain degree of interference and authority. In this regard, city mayors may perceive the closure of an ASL as problematic as it brings a loss of physical proximity to DG, which is likely to decrease the accountability of the latter to the former. From the perspective of LHA directors, mergers are thus expected to bring their agencies further away

from local politicians, decreasing their perceived influence on agencies' management and managerial appointments.

“Obviously, this operation comes with some costs, because local khalifs no longer had power, as the relationships between local or ‘localistic’⁹ politics and the direction of small LHA were very close before, but after [the merger] they became distant.”

The relationships with the Region and with regional politics remained stable or even improved, although some interviewees pointed to the trade-off between the increased size and autonomy of the merged LHA and the lower control from politics. Mergers may provide an opportunity to strengthen horizontal relationships and decision-making chains, as a larger size makes it inefficient, if not unfeasible, to report all issues vertically to top hierarchical positions. However, larger size also requires more costly effort to coordinate communication with external interlocutors, but also with the internal staff.

“Physical distance makes collaborators feel a little bit neglected; even if they would be motivated, sometimes they lose motivation as they feel distant from the direction.”

Indeed, in some smaller pre-merger agencies, the staff had almost personal knowledge of each other, which becomes impossible in larger entities. Information channels thus become radically overturned.

“Well, then there were problems of course because the staff who were used to working for a certain reality found themselves working for a wider reality so that the personal relationship that was there with some administrative people was no longer such, and the competence of individual

⁹ Translation from Italian “*localistico*”, which means “local” with a negative connotation.

administrative staff for a certain territorial reality was a little diminished, to put it in these terms."

In some cases, it was perceived that mergers could strengthen accountability concerning patients' advocacy associations and, thus, ultimately to citizens. However, the general feeling was that *"mergers did not change interlocutors, but rather the object of the discourse."*

Cost savings and performance

The interviewees outlined a shared need to update indicators and increase the standards of performance evaluation systems because of increased organizational complexity.

"In [pre-merger] provincial agencies, there was a need to have quality control and a more structured performance, budget, and evaluation plan, with lower dimensions, with a bit more 'artisanal' professional level ."

Sometimes, new performance indicators were created after the mergers, especially in Lombardy.

"In structuring the new performance plan, a thousand indicators have been identified that are linked to the efficiency of health care provision, but also its effectiveness. There were also indicators of resource consumption, medicines, medical instruments, and so on."

The need to improve indicators was linked to the belief that the complexity of performance evaluation increased after the mergers. A further challenge was the coordination and performance evaluation of very different and inhomogeneous systems. Some of the pre-merger performance indicators, such as waiting lists for treatments, were perceived as less meaningful when traveling times increased significantly with an increase in the geographical extension of the agency. Similarly, a decrease in passive mobility lost meaningfulness as an indicator when it meant that

services were no longer outsourced to other agencies in the region because they were part of the same agency. Although many directors confirmed that they mostly expected cost savings in administrative areas, the quantitative analysis provided no evidence of such merger gains. One of the likeliest explanations that came out from the interviews relates to the strong rigidity of the public sector labor market in Italy, which severely limits firing employees.

"Well then, we do have fewer managers, because before you had managers of two LHA, now you have the managers of only one LHA, a larger one, but overall fewer managers. However, it's not that you sent anyone home, in the public sector, no... So it is clear that with the unification of some offices, maybe you do not replace a part of the turnover, but you do not send anyone home."

On the positive side, it was perceived that mergers could bring useful confrontations and benchmarking among different agencies to find best practices. Indeed, it was perceived that, in some cases, the reorganization boosted a mechanism of positive competition, creating an urge to evaluate performance and the desire to be evaluated.

"There has been a change in the mood regarding the evaluation, with a bigger attention, precisely because the degree of complexity increased, so the degree of competition among professionals increased, there is a desire to measure and be measured."

A limited increase in post-merger contractual power in tendering might be due to pre-existing agreements, for example, the 'Aree Vaste' structures. This is in line with what Garlatti (2020) highlighted in the case of voluntary municipal mergers in the Friuli-Venezia-Giulia Region. Where these contractual arrangements were not already in place, the merger generally improved contractual power in tender procedures. This can be evidence of mergers being the final legal formalization of previous "de facto" collaborations. However, the econometric analysis did not

show any merger anticipation effects one or two years before the merger.

"We had a long history of collaboration of the two agencies, on the information system, both in the administrative part and in the part of managing health, the laboratories, radiology, reservations, etc. [...] and this has in some way favored the activity of health provision. And in some ways, we didn't make great efforts, precisely because the system already had some aspects in place."

There was general agreement among directors that scale economies resulting from the uniformizing of procedures are expected to be increasing in the number of agencies that merge. However, they may take some years to emerge and are not monotonically related to population size—they should be more pronounced for smaller agencies. Moreover, the efficiencies derived from spreading fixed costs on a larger scale can be upset by the transitional costs of adapting to the new agency, adjusting the headquarters and physical facilities, and harmonizing staff salaries after bargaining with trade unions. These factors are abundantly confirmed in the literature on public-sector mergers (Hutchings et al., 2003; Bikker and Van der Linde, 2016; Moisisio and Uusitalo, 2013).

The goal of cost savings was not perceived in a clear antithesis with performance improvements. Directors seemed to be aware of the positive relationship between volume and outcomes in healthcare provision, which was also highlighted by recent reports of the National Agency for Regional Health Services (AGENAS). LHA mergers creating larger structures should favor this performance-improving mechanism, at least until a certain size threshold.

"To treat certain pathologies, it has been shown that there is a very direct relationship between volumes and outcomes. [...] For example, regarding oncological volumes, if we were to analyze

the hospitals of [Region X], my hospital is the only one that, despite being a small structure, respects the oncological volumes established by AGENAS PNE for the treatment of some pathologies, for example, colorectal cancer."

Discussion

The efficiency story behind the administrative reorganization of local government and public agencies driven by NPM doctrine in the 1980s and 1990s seems less and less convincing nowadays. Political motivations affecting managerial organizational dynamics and, thus, performance outcomes do not seem to have been adequately recognized and investigated in the literature, which is also very far from reaching a consensus on the positive effects of merger reforms. This article combines quantitative and qualitative evidence in the context of a wave of mergers of Italian Local Health Agencies (LHA) in the years 2011-2017 to understand if they brought changes in financial outcomes and better public service provision, and to investigate the organizational and managerial mechanisms behind the observed results.

The quantitative analysis adopts a staggered differences-in-differences (DiD) methodology using never-merged and not-yet-merged LHA as counterfactual groups for merging ones and assesses the impact of mergers on different types of LHA expenditures as well as on indicators of public health service provision. The analysis showed no evidence of merger efficiencies in financial terms and some evidence of a decrease in the quality of public service provided. Indeed, post-merger agencies seem to have higher occurrences of avoidable hospitalizations and hospital mortality per capita; this result is particularly observable one year after the merger.

The qualitative research design draws insights from 20 semi-structured interviews with LHA directors to reveal that: i) the reduction of some of the fixed costs might be counterbalanced by the increased costs of uniformizing, coordinating, adapting, and bargaining in the new agency, ii) the lack of savings in the costs of goods purchased might be due to pre-existing agreements for joint tender procedures and informal collaboration histories, iii) the lack of cost savings in administrative staff might be due to the strong rigidities of public sector employment in Italy which

severely restricts the possibility of firing staff and iv) scale economies may require several years, and thus may not be evident for mergers that happened five to eight years before this study.

The last point is particularly relevant for its possible implications in terms of political-managerial and electoral accountability. Indeed, the time between the merger decision and implementation and the realization of its outcomes might provide public managers with a possible *escamotage* to avoid blame for the lack of immediate efficiencies. At the same time, it could also possibly create a mismatch in citizens' attribution of responsibility, when the coalition that proposes the mergers does not remain in office long enough to observe its outcomes.

The article thus proposes an extension of the existing literature on the efficiency and political determinants of public agencies' mergers. It does so with a mixed methods design that provides qualitative evidence to understand the molecular mechanisms behind the observed results, thus validating the quantitative indicators used and triangulating the findings to enhance their validity. Moreover, it assesses the effects of public agencies' mergers on non-financial outcomes, such as the quality of service provided, which has often been difficult to measure and analyze in previous related research. The empirical setting of Italy might, of course, be different from that of other countries, for which different results might be observed due to different organizational dynamics and institutional configurations. However, related research confirms that several of the mechanisms emerging from the qualitative interviews can be observed also in other European settings.

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Tables and figures

Table 1. A review of evaluation studies of local government and public agencies' mergers.

	Financial outcomes	Non-financial outcomes
Negative effects	<ul style="list-style-type: none"> • Moisio and Uusitalo (2013) – expenditure increase 	<ul style="list-style-type: none"> • Hansen (2012, 2014), Lassen and Serritzlew (2011) – Decrease in local political trust and satisfaction • Roesel (2017), Blesse and Roesel (2019), Lapointe and Tukiainen (2018), Heinisch et al. (2018) – decrease in political participation • Boyne (1996) – decrease in quality, efficiency, and administrative effectiveness • Saarimaa and Tukiainen, 2015; Hansen, 2014b, 2019; – free-riding incentives, lack of accountability
Positive effects	<ul style="list-style-type: none"> • Hanes (2015) – a decrease of expenditures up to a certain size threshold • Blom-Hansen (2014) – a decrease in administrative costs • Bikker and Van der Linde (2016) – potential scale economies 	<ul style="list-style-type: none"> • Steiner and Kaiser (2016) – improvement of public service delivery, staff professionalization, and local government autonomy • Steiner (2003) – performance increase • Krøtel et al. (2017) – improved managerial capacity

<p>No or ambiguous effects</p> <ul style="list-style-type: none"> • Steiner and Kaiser (2016) – no effect on expenditure • Roesel (2017) – no effect on expenditure • Blesse and Roesel (2019) – no effect on expenditure • Blom-Hansen et al. (2016) – no effect on expenditure • Garlatti et al. (2020) – limited effects on cost savings 	<ul style="list-style-type: none"> • Blom-Hansen et al. (2016, 2021) – no effect on service quality or scale effectiveness (performance) • Steiner and Kaiser (2016) – no effect on local democracy • Bhatti and Hansen (2019) – ambiguous effects on democratic participation • Garlatti et al. (2020) – limited improvement of service delivery
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Figure 1. The Mixed Methods Research Framework

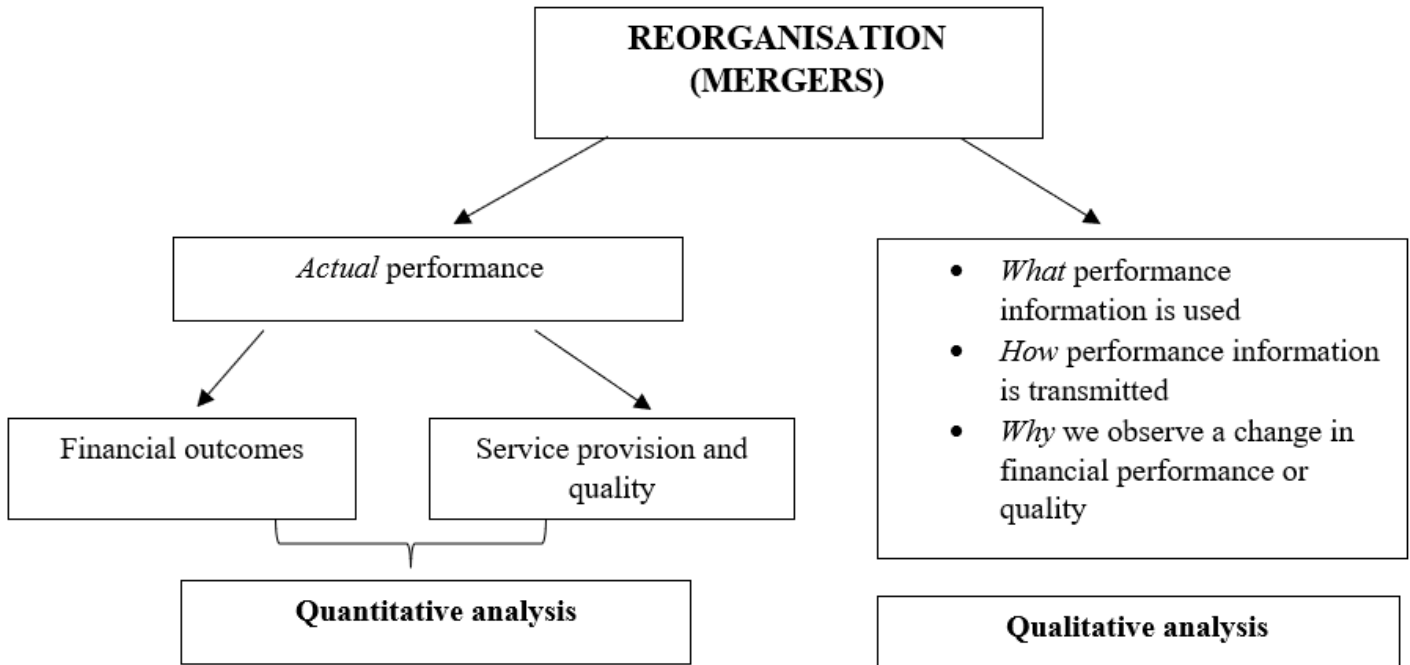


Table 2. Summary Statistics

Independent Variables	Mean	SD
Medical goods per capita (Euro)	0.7	0.58
Non-medical goods per capita (Euro)	0.02	0.02
Total staff costs per capita (Euro)	30.05	30.82
Total admin. staff costs per capita (Euro)	0.38	0.48
Administrative directors' costs per capita (Euro)	2.48	2.39
Control variables	Mean	SD
Regional GDP per capita (thousand Euro)	27.37	6.67
Total LHA revenues (thousand Euro)	97,889	120,551
Total LHA reference population (thousands)	486.3	392.9
Passive mobility (intra-region, thousands)	4.9	11.2
Passive mobility (extra-region, thousands)	10.14	19.03
Share of private health expenditure (% of total regional health exp.)	0.19	0.05
Regional share of 65+ (% of total pop.)	0.21	0.02

Table 3. Staggered DiD treatment effect estimates on expenditure for medical and non-medical goods (in Euro)

	(1)	(2)	(3)	(4)
	Log of non-medical goods per capita	Log of non-medical goods per capita	Log of medical goods per capita	Log of medical goods per capita
Merged (Yes = 1, No = 0)	-0.170 (0.115)	-0.104 (0.107)	-0.008 (0.089)	0.019 (0.082)
DiD	0.187 (0.178)		0.094 (0.138)	
DiD t+1		-0.089 (0.105)		-0.005 (0.097)
Regional GDP per capita	-0.019* (0.010)	-0.019 (0.013)	-0.034*** (0.008)	-0.034*** (0.008)
Share of 65+	-3.802 (3.833)	-4.054 (4.742)	-0.434 (2.990)	-0.479 (2.731)
LHA reference population	-0.009*** (0.001)	-0.008*** (0.002)	-0.005*** (0.001)	-0.005*** (0.001)
Total LHA revenues	-0.041 (0.097)	-0.039 (0.092)	-0.058 (0.083)	-0.058 (0.082)
Passive mobility (intra-Region)	-13.151 (49.496)	-15.064 (49.778)	80.875* (43.702)	79.422** (34.898)

Passive mobility (extra-Region)	2.664 (29.397)	2.401 (26.082)	-1.733 (25.609)	-1.954 (24.792)
Share of private health expenditure	-9.668*** (1.318)	-10.023*** (1.708)	-4.474*** (1.026)	-4.596*** (1.005)
Constant	-0.191 (0.891)	-0.132 (1.058)	1.501** (0.694)	1.511** (0.633)
N	713	713	693	693
R ²	0.5	0.5	0.38	0.38

Staggered differences-in-differences random effects regression. Standard errors are in parentheses and clustered at the LHA level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Regional GDP per capita is expressed in thousand Euro, LHA reference population in 10 thousand units, total LHA revenues in 10 million Euro, intra-regional and extra-regional mobility in 1 million Euro. Private health expenditure is expressed as a share of total public health regional expenditure per region, and the number of people older than 65 is expressed as a share of the total population of the region.

Table 4: Staggered DiD treatment effect estimates on expenditure for staff

	(1)	(2)	(3)	(4)	(5)	(6)
	Log of total staff costs per capita	Log of total staff costs per capita	Log of admin. directors' costs per capita	Log of admin. directors' costs per capita	Log of admin. staff costs per capita	Log of admin. staff costs per capita
Merged (Yes = 1, No = 0)	-0.048 (0.087)	0.071 (0.085)	-0.038 (0.091)	-0.010 (0.087)	-0.073 (0.067)	-0.052 (0.065)
DiD	0.376** (0.187)		0.148 (0.133)		0.072 (0.115)	
DiD t+1		-0.091 (0.088)		0.065 (0.089)		-0.005 (0.097)
Regional GDP per capita	-0.034*** (0.008)	-0.033*** (0.008)	-0.016* (0.009)	-0.016* (0.009)	-0.015** (0.007)	-0.015** (0.007)
Share of 65+	-2.084 (2.693)	-2.374 (2.763)	-3.203 (2.933)	-3.222 (2.940)	-2.239 (2.497)	-2.274 (2.498)
LHA reference population	-0.009*** (0.002)	-0.007*** (0.002)	-0.005*** (0.001)	-0.005*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)

Total LHA revenues	-0.002 (0.004)	-0.002 (0.004)	-0.003 (0.004)	-0.003 (0.004)	-0.008*** (0.003)	-0.008** (0.003)
Passive mobility (intra-Region)	1.193 (1.826)	0.994 (1.862)	-1.895 (1.616)	-1.889 (1.636)	-0.299 (1.346)	-0.363 (1.355)
Passive mobility (extra-Region)	0.326 (1.333)	0.250 (1.353)	-2.115* (1.109)	-2.139* (1.107)	-1.375 (0.891)	-1.356 (0.904)
Share of private health expenditure	-5.718*** (1.228)	-6.291*** (1.206)	-3.583*** (1.073)	-3.685*** (1.049)	-4.138*** (0.979)	-4.231*** (0.957)
Constant	6.373*** (0.664)	6.440*** (0.676)	0.858 (0.675)	0.853 (0.678)	3.092*** (0.575)	3.098*** (0.577)
<i>N</i>	676	676	692	692	709	709
R ²	0.49	0.48	0.26	0.26	0.36	0.36

Staggered differences-in-differences random effects regression. Standard errors are in parentheses and clustered at the LHA level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regional GDP per capita is expressed in thousand Euro, LHA reference population in 10 thousand units, total LHA revenues in 10 million Euro, and intra-regional and extra-regional passive mobility in 1 million Euro. Private health expenditure is expressed as a share of total health expenditure per region, and the number of people older than 65 is expressed as a share of the regional population.

Table 5: Summary Statistics (2)

Independent variables	Mean	SD
Urgent ordinary hospitalizations (n. per year)	29,071	22,336
Total DRG reimbursements per capita (Euro per year)	6.23	0.13
Ordinary hospitalizations reimbursements per capita (Euro per year)	6.14	0.13
Daily hospitalizations reimbursements per capita (Euro per year)	3.74	0.410
Avoidable Hospitalizations AHs (n. per year)	5,214	4,286
Hospital mortality (n. per year)	1,829	1,411
Active patient mobility (inter-regional and intra-regional, n. of patients per year)	5,933	4,970

Table 6: Staggered DiD treatment effect estimates on SDO indicators

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Logarithm of urgent ordinary hospitalizations per capita	Logarithm of total DRG reimbursements per capita	Logarithm of reimbursements for ordinary hospitalizations per capita	Logarithm of reimbursements for daily hospitalizations per capita	Logarithm of AHs per capita	Logarithm of hospital mortality per capita	Logarithm of active patient mobility per capita
Merged (Yes=1, No=0)	-0.096** (0.041)	-0.100* (0.055)	-0.091* (0.052)	-0.181*** (0.069)	-0.143*** (0.050)	0.046 (0.058)	-0.785*** (0.174)
DiD	0.190 (0.137)	0.236 (0.198)	0.228 (0.188)	0.157 (0.162)	0.245 (0.152)	0.199 (0.164)	1.196** (0.555)
Regional GDP per capita	0.002 (0.002)	0.002 (0.002)	0.003 (0.002)	0.002 (0.009)	0.017*** (0.004)	0.004 (0.004)	-0.008 (0.006)
Share of 65+	-0.817 (0.790)	2.714*** (0.828)	2.571*** (0.714)	-1.178 (3.239)	-4.274*** (1.107)	8.881*** (1.633)	-4.841** (2.080)
LHA reference population	-0.003 (0.002)	-0.004 (0.003)	-0.004 (0.003)	-0.002 (0.002)	-0.003 (0.002)	-0.004 (0.003)	-0.018** (0.009)
Share of private expenditure	-0.379 (0.712)	1.030 (0.906)	1.121 (0.870)	-1.872 (1.192)	-0.356 (0.824)	0.212 (0.956)	-0.473 (1.272)

Constant	-2.461***	5.601***	5.478***	4.619***	-3.777***	-7.489***	-2.155***
	(0.207)	(0.218)	(0.195)	(0.693)	(0.262)	(0.420)	(0.665)
<i>N</i>	831	831	831	831	831	831	831
<i>R</i> ²	0.07	0.08	0.1	0.17	0.06	0.47	0.17

Staggered differences-in-differences random effects regression. Standard errors are in parentheses and clustered at the LHA level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regional GDP per capita is expressed in thousand Euro, and the LHA reference population is expressed in 10 thousand units. Private health expenditure is expressed as a share of total health expenditure per region, and the number of people older than 65 is expressed as a share of the regional population.

Table 7: Staggered DiD treatment effect estimates at t + 1 on SDO indicators

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Logarithm of urgent ordinary hospitalizations' per capita	Logarithm of total DRG reimbursements per capita	Logarithm of reimbursements for ordinary hospitalizations per capita	Logarithm of reimbursements for daily hospitalizations per capita	Logarithm of AHs per capita	Logarithm of hospital mortality per capita	Logarithm of active patient mobility per capita
Merged (Yes=1, No=0)	-0.052** (0.023)	-0.042* (0.022)	-0.035* (0.021)	-0.155*** (0.053)	-0.087*** (0.033)	0.101** (0.040)	-0.471*** (0.128)
DiD t+ 1	0.034*** (0.010)	0.029*** (0.009)	0.024*** (0.009)	0.084*** (0.031)	0.053*** (0.018)	-0.012 (0.014)	0.064 (0.043)
Regional GDP per capita	0.002 (0.002)	0.002 (0.002)	0.003 (0.002)	0.002 (0.009)	0.017*** (0.003)	0.004 (0.003)	-0.009 (0.006)
Share of 65+	-0.755 (0.765)	2.821*** (0.822)	2.658*** (0.701)	-1.024 (3.237)	-4.180*** (1.092)	8.872*** (1.598)	-4.233** (2.056)
LHA reference population	-0.002 (0.002)	-0.003 (0.003)	-0.003 (0.002)	-0.001 (0.002)	-0.002 (0.002)	-0.003* (0.002)	-0.015* (0.009)
Share of private expenditure	-0.496 (0.613)	0.901 (0.785)	0.981 (0.749)	-1.872* (1.128)	-0.493 (0.725)	0.017 (0.862)	-0.543 (1.300)

Constant	-2.480*** (0.201)	5.570*** (0.217)	5.452*** (0.192)	4.572*** (0.693)	-3.806*** (0.258)	-7.487*** (0.411)	-2.385*** (0.652)
<i>N</i>	831	831	831	831	831	831	831
R ²	0.07	0.07	0.1	0.17	0.05	0.48	0.14

Staggered differences-in-differences random effects regression. Standard errors are in parentheses and clustered at the LHA level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regional GDP per capita is expressed in thousand Euro, and the LHA reference population is expressed in 10 thousand units. Private health expenditure is expressed as a share of total health expenditure per region, and the number of people older than 65 is expressed as a share of the regional population.

Table 8: Staggered DiD treatment effect estimates on SDO indicators – excluding

Lombardy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Logarithm of urgent ordinary hospitalizations' per capita	Logarithm of total DRG reimbursements per capita	Logarithm of reimbursements for ordinary hospitalizations' per capita	Logarithm of reimbursements for daily hospitalizations per capita	Logarithm of AHs per capita	Logarithm of hospital mortality per capita	Logarithm of active patient mobility per capita
Merged (Yes=1, No=0)	-0.308*** (0.096)	-0.121 (0.078)	-0.123 (0.075)	-0.085 (0.078)	- 0.332*** (0.098)	-0.005 (0.084)	- 0.957*** (0.148)
DiD	0.442** (0.210)	0.316 (0.270)	0.321 (0.263)	0.086 (0.209)	0.451** (0.213)	0.255* (0.152)	1.111*** (0.263)
Regional GDP per capita	0.006 (0.004)	0.000 (0.003)	0.001 (0.003)	0.005 (0.009)	0.020*** (0.006)	-0.001 (0.005)	- 0.016*** (0.005)
Share of 65+	-2.889** (1.244)	2.416** (0.950)	1.953** (0.824)	2.793 (3.202)	- 6.452*** (1.662)	10.921* ** (2.182)	- 5.334*** (1.972)
LHA reference population	0.013*** (0.004)	-0.006 (0.005)	-0.006 (0.005)	-0.002 (0.004)	0.013*** (0.004)	0.014*** (0.003)	0.003 (0.003)
Share of private expenditure	-0.871* (0.526)	1.127 (0.802)	1.005 (0.779)	1.124 (1.189)	-0.432 (0.759)	1.566 (1.040)	-1.567* (0.880)
Constant	10.132***	5.777***	5.770***	3.126***	8.712***	3.912***	10.223* **

-	(0.397)	(0.298)	(0.273)	(0.693)	(0.453)	(0.615)	(0.604)
<i>N</i>	754	754	754	754	754	754	754
<i>R</i> ²	0.81	0.04	0.07	0.08	0.77	0.75	0.41

Staggered differences-in-differences random effects regression. Standard errors are in parentheses and clustered at the LHA level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regional GDP per capita is expressed in thousand Euro, and the LHA reference population is expressed in 10 thousand units. Private health expenditure is expressed as a share of total health expenditure per region, and the number of people older than 65 is expressed as a share of the regional population.

Table 9: Staggered DiD treatment effect estimates on SDO indicators – placebo check

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Logarithm of urgent ordinary hospitalization's per capita	Logarithm of total DRG reimbursements per capita	Logarithm of reimbursements for ordinary hospitalizations per capita	Logarithm of reimbursements for daily hospitalizations' per capita	Logarithm of AHs per capita	Logarithm of hospital mortality per capita	Logarithm of active patient mobility per capita
Merged (Yes=1, No=0)	-0.053** (0.023)	-0.045** (0.023)	-0.036* (0.021)	-0.177*** (0.063)	-0.093*** (0.034)	0.098** (0.041)	-0.464*** (0.128)
DiD placebo year	0.022 (0.018)	0.023 (0.017)	0.016 (0.015)	0.112 (0.083)	0.046 (0.029)	0.003 (0.022)	0.013 (0.029)
Regional GDP per capita	0.003 (0.002)	0.002 (0.002)	0.003 (0.002)	0.003 (0.009)	0.017*** (0.004)	0.004 (0.004)	-0.008 (0.006)
Share of 65+	-0.887 (0.754)	2.643*** (0.819)	2.529*** (0.686)	-1.528 (3.374)	-4.452*** (1.080)	8.878*** (1.626)	-4.480** (2.081)
LHA reference population	-0.002 (0.002)	-0.003 (0.003)	-0.003 (0.003)	-0.002 (0.002)	-0.002 (0.002)	-0.003* (0.002)	-0.015* (0.009)
Share of private	-0.552	0.846	0.937	-1.969* (0.937)	-0.571	0.038	-0.768

expenditure

	(0.602)	(0.776)	(0.741)	(1.124)	(0.721)	(0.859)	(1.278)
Constant	-2.451*** (0.197)	5.609*** (0.215)	5.481*** (0.188)	4.671*** (0.717)	-3.749*** (0.255)	-7.491*** (0.416)	-2.305*** (0.656)
<i>N</i>	831	831	831	831	831	831	831
R ²	0.07	0.07	0.09	0.18	0.05	0.48	0.14

Staggered differences-in-differences random effects regression. Standard errors are in parentheses and clustered at the LHA level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regional GDP per capita is expressed in thousand Euro, and the LHA reference population is expressed in 10 thousand units. Private health expenditure is expressed as a share of total health expenditure per region, and the number of people older than 65 is expressed as a share of the regional population.

Figure 2. Trends of medical and non-medical goods expenditure per capita (in Euro)

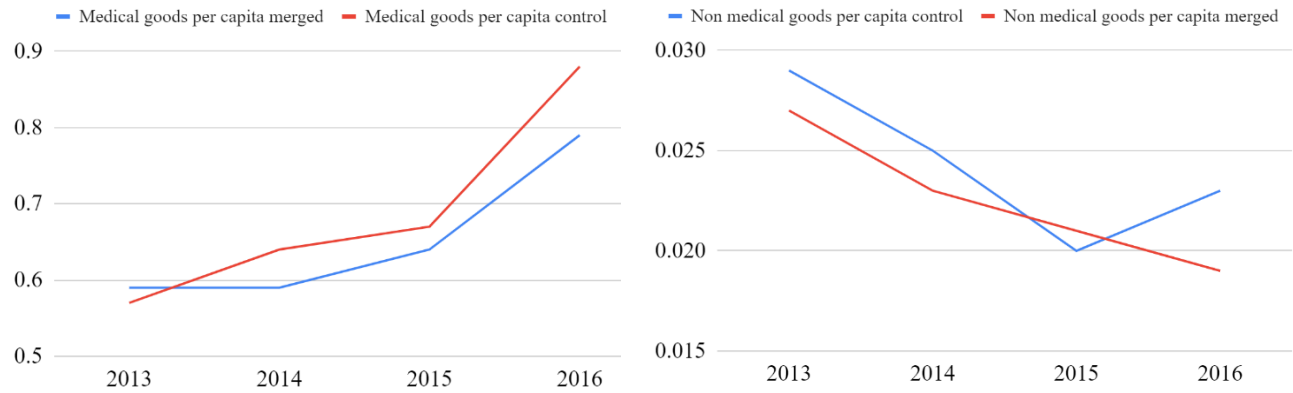


Figure 3. Trends in staff expenditure per capita. Figures in Euro

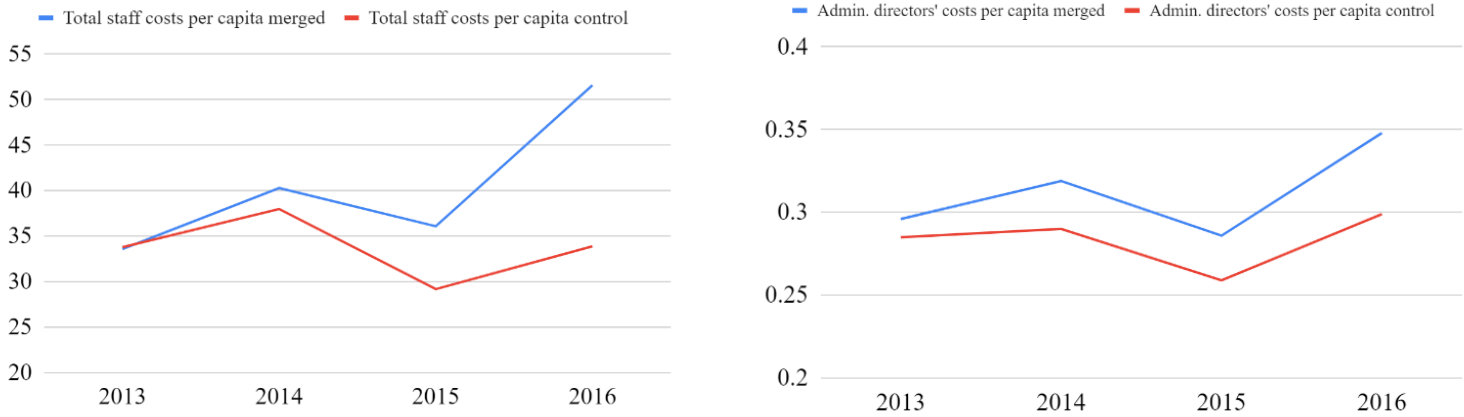


Figure 4. Trends in DRG expenditure per capita (Euro, left panel) and hospital mortality (n. occurrences per year, right panel)

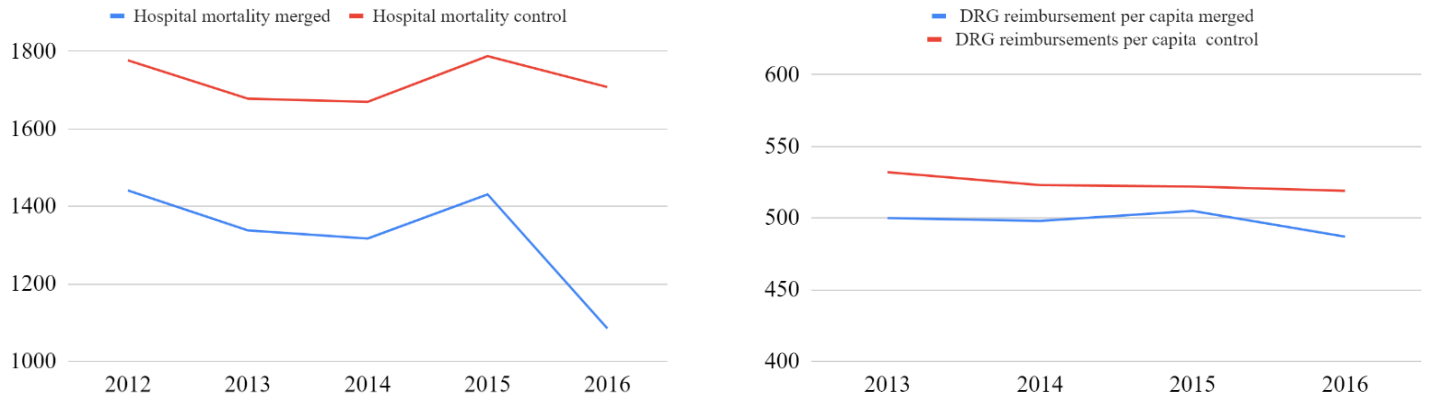


Figure 5. Trends of Avoidable Hospitalisations and active patient mobility (n. occurrences per year)

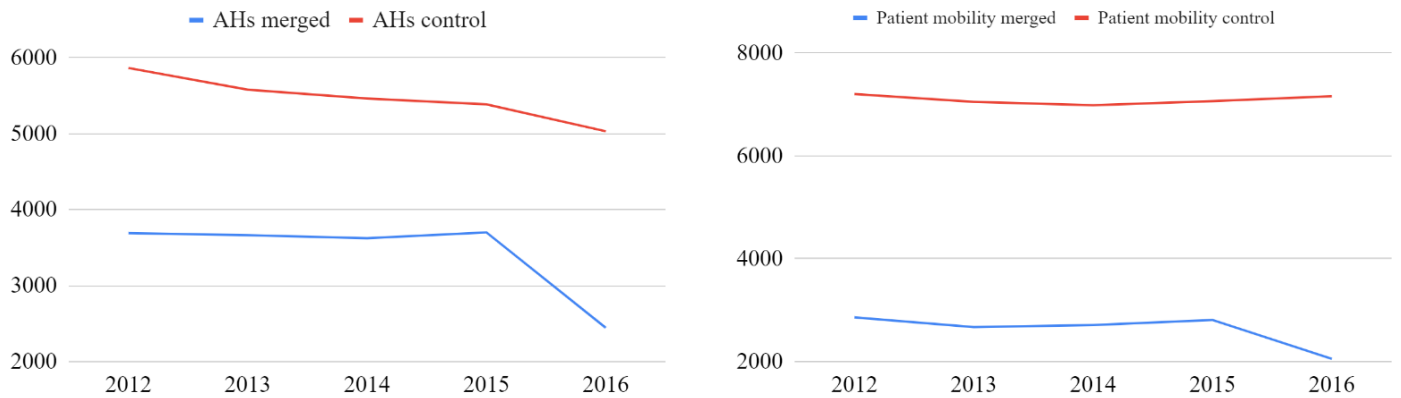


Table 10: Overview of interview findings

	Positive effects	Negative effects
Increased inter and intra-LHA competition among directors	<ul style="list-style-type: none"> • Increased possibilities for job rotation of professionals • Stimulus for benchmarking • Accountability and performance-enhancing 	<ul style="list-style-type: none"> • Loss of reference points and uncertainty about future tasks • Reduced personal knowledge of colleagues
Larger distance from local (regional and municipal) politics	<ul style="list-style-type: none"> • Lower inference from politics • The Region imposes fewer limits on the autonomy of agencies 	<ul style="list-style-type: none"> • Lower democratic accountability • The Region provides less guidance in the merger processes
Changes in relationships with external stakeholders	<ul style="list-style-type: none"> • Not worsened, in some cases even improved 	<ul style="list-style-type: none"> • Changes in names and organizational structure can confuse citizens • Merger reform effectiveness requires a change in the population's perceptions

Changes in performance evaluation indicators

- More sophisticated instruments for performance evaluation due to larger size
- Increased organizational complexity as an opportunity for improvement

- The challenge of homogenizing very different systems
- Little pre- and post-merger comparability of some performance indicators

Change of performance linked to LHA size

- Possible scale efficiencies, especially in administrative areas
- A positive relationship between volumes and outcomes (until a certain size)
- Longer vertical chains strengthen horizontal communication and decision-making channels

- Merger efficiencies take time
 - Transitional and re-allocative costs
 - Lower staff morale due to greater distance from the Direction
 - Limited increases in contractual power when there were pre-existing agreements for tenders
 - Labor market rigidities make it impossible to dismiss employees
-

Appendix

Table A.1 Summary of mergers of Italian LHA, 2004-2017

Year	Region	Mergers	Change in n. of LHA	Avg. ref. population pre-merger	Avg. ref. population post-merger
2004	Marche	13 LHA merged	From 13 to 1	N.A.	N.A.
2006	Molise	4 LHA merged	From 4 to 1	N.A.	N.A.
2007	Alto Adige	4 LHA merged	From 4 to 1	N.A.	N.A.
2007	Apulia	6 LHA merged	From 12 to 6	N.A.	N.A.
2008	Piedmont	9 LHA merged	From 22 to 13	N.A.	N.A.
2008	Calabria	5 LHA merged	From 11 to 6	N.A.	N.A.
2009	Campania	6 LHA merged	From 13 to 7	N.A.	N.A.
2009	Basilicata	3 LHA merged	From 5 to 2	N.A.	N.A.
2010	Abruzzo	2 LHA merged	From 6 to 4	N.A.	N.A.
2011	Calabria	1 LHA merged	From 6 to 5	N.A.	N.A.
2013	Umbria	2 LHA merged	From 4 to 2	238,435	438,175
2014	Emilia-Romagna	3 LHA merged	From 11 to 8	481,824	659,805
2015	Friuli Venezia Giulia	1 LHA merged	From 6 to 5	226,990	239,634
2016	Lombardy	7 LHA merged	From 15 to 8	701,997	1,280,708
2016	Tuscany	9 LHA merged	From 12 to 3	341,496	1,208,538
2016	Lazio	2 LHA merged	From 12 to 10	404,466	406,196
2017	Piedmont	1 LHA merged	From 13 to 12	358,166	357,432
2017	Veneto	13 LHA merged	From 21 to 9	248,853	639,450
2017	Sardinia	8 LHA merged	From 8 to 1	252,505	1,648,176

Interview protocol (English translation)

- How did you find out about this director role before you were appointed, and what was your motivation for becoming a director in this LHA?
- In your view, what were/have been the most significant changes in the LHA as a result of the merger compared to the pre-merger agency you were a part of?
- Do you feel that mergers significantly changed some key work relationships among the actors or the agencies involved? (E.g. in terms of information flows, tasks, and responsibilities)
- Do you feel that the reorganization processes altered the mechanisms and/or the indicators used for the performance evaluation of the different actors and structures of the RHS? In your opinion, what are the best indicators of LHA performance to be used for assessing the effects of mergers/reorganization?
- Do you think that the mergers caused better resource use and rationalization, and if so, was this linked to (significant) cost reductions? What types of costs were affected the most?
- Do you think that the mergers of LHA affected the mechanisms for appointments, and if so in what way?
- As a director, who would you say it is most important to maintain good working relationships with (inside your LHA) to carry out your role well? [to prompt - other directors? The triad?] And what about outside of the LHA?

Data sources

- List of merging LHA:

https://www.salute.gov.it/imgs/C_17_bancheDati_25_allegati_iitemAllegati_0_fileAllegati_iitemFile_0_file.pdf

- Balance sheets data of Italian LHA (years 2010-2021):

<https://openbdap.mef.gov.it/it/SSN/Analizza>

- DRG reimbursement tariffs:

https://www.salute.gov.it/portale/temi/p2_6.jsp?id=3662&area=programmazioneSanitariaLea&menu=vuoto

- Per capita GDP of each Italian region (Eurostat Regional Yearbooks and Eurostat database):

<https://ec.europa.eu/eurostat/web/national-accounts/regional-accounts>;

<http://dati.istat.it/Index.aspx?QueryId=11483#>

- Italian population per Region from ISTAT:

http://dati.istat.it/Index.aspx?DataSetCode=DCIS_POPRES1#

- Share of private health expenditure “Expenditure for other social benefits by private individuals as a percentage of current health expenditure by Region - Years 2012-2020”:

https://www.rgs.mef.gov.it/VERSIONE-I/attivita_istituzionali/monitoraggio/spesa_sanitaria/

- Total inhabitants and share of 65+:

http://dati.istat.it/Index.aspx?DataSetCode=DCIS_POPRES1

and

<https://www.tuttitalia.it/statistiche/censimento-2011> and <https://www.tuttitalia.it/italia/>

- LHA reference population:

https://www.salute.gov.it/portale/documentazione/p6_2_8_1_1.jsp?lingua=italiano&id=16

and historical versions of the data for the years 2011-2018 obtained through a direct email request to the Statistics Department of the Health Ministry.

SDO data: not publicly available, obtained upon request to the Ministry of Health, Planning Department through the Centre for Research on Health and Social Care Management (CERGAS) of SDA Bocconi.

Balance sheet entries

Table A.2 Explanations of balance sheet entries used in the analysis

Variable name	Balance sheet code	Explanation
Medical services	B.2.A	<i>“Acquisti servizi sanitari”</i> – Purchase of medical services
Medical goods	B.1.A.	<i>“Acquisti Beni sanitari”</i> – Purchase of medical goods
Non-medical goods	B.1.B	<i>“Acquisti beni non sanitari”</i> – Purchase of non-medical goods
Total staff costs	Sum of entries B.5 – B.6 – B.7– B.8.	<i>“Totale costo del personale”</i> – Total staff costs
Total administrative staff costs:	B.8	<i>“Personale del ruolo amministrativo”</i> - Administrative staff costs
Administrative directors costs:	B.8.A	<i>“Costo del personale dirigente ruolo amministrativo”</i> - Administrative directors’ costs
Passive mobility (intra-Region):	B.2.A.1.2	<i>“Contiene il costo per l’acquisto di servizi di medicina di base da altre Aziende sanitarie pubbliche della Regione.”</i> – Costs for purchase of general practitioners’ services from other public health agencies of the Region

Passive mobility_2 (extra-Region)	B.2.A.1.3	<i>Contiene il costo per l'acquisto di servizi di medicina di base da Aziende sanitarie pubbliche di altre Regioni.</i> - Costs for purchase of general practitioners' services from public health agencies of other Regions
Total revenues	A.1	<i>“ Contributi in c/esercizio ”</i>

SDO indicators

Table A.3 Explanations of SDO and DRG indicators used in the analysis

Variable name	Explanation
AHs (Avoidable Hospitalizations)	Codes for Ambulatory care sensitive conditions (<i>Acsc</i>) calculated based on the ICD-9 Diagnosis Codes from Allegri et al. (2022).
Urgent ordinary hospitalizations	N. of urgent ordinary hospitalizations per year
Hospital mortality	Number of hospital deaths per year – calculated as =1 if the mode of hospital discharge= “death”
DRG reimbursements for ordinary hospitalizations	<p>Calculated using the Health Ministry’s official tariffs for reimbursements according to the law decree of October 18, 2012, available at https://www.gazzettaufficiale.it/eli/gu/2013/01/28/23/so/8/sg/pdf.</p> <p>Based on the explanations in the decree, the various types of hospitalizations - ordinary hospitalizations, DH hospitalizations, hospital mortality o patient transfer, hospitalizations over the threshold (“<i>oltre soglia</i>” etc. - are separated and allocated to the standardized reimbursement tariff using a single value for all years.</p>
DRG reimbursements for daily hospitalizations	As above
Total DRG reimbursements for hospitalizations	As above. Total DRG reimbursements for hospitalizations is the sum of the previous two entries (daily and ordinary).
Active patient intra or extra-regional mobility	Indicator =1 if reference LHA different from LHA of inpatient admission



Logged values of independent variables

Table A.4. Summary statistics (logged values)

Independent Variables	Mean	SD
Medical goods per capita (Euro)	-0.38	0.69
Non-medical goods per capita (Euro)	-4.11	0.98
Total staff costs per capita (Euro)	3.53	0.77
Total admin. staff costs per capita (Euro)	1.06	0.58
Administrative directors' costs per capita (Euro)	-1.3	0.66
Urgent ordinary hospitalizations (n. per year)	10.03	0.69
Total DRG reimbursements per capita (Euro per year)	19.08	0.7
Ordinary hospitalizations reimbursements per capita (Euro per year)	18.98	0.7
Daily hospitalizations reimbursements per capita (Euro per year)	16.61	0.78
Avoidable Hospitalizations AHs (n. per year)	8.29	0.73
Hospital mortality (n. per year)	7.28	0.67
Active patient mobility (inter-regional and intra- regional, n. per year)	8.33	0.91

Essay 3: The effectiveness of policy communication during crises

Joint work with Vincenzo Galasso

COVID-19 has created the highest level of health and economic risk since World War II. The first outbreak of the pandemic, in the winter of 2020, constituted an enormous challenge to global leaders, who had to take action to restrict the spread of the coronavirus while at the same time trying to minimize the economic impact of the lockdown measures and to keep public order. The early restraining measures adopted in many countries to contain the spread of COVID-19 imposed large economic costs and induced psychological strain on the population (Baldwin and Di Mauro, 2020; Brooks et al., 2020). Anger, fear, depression, and a sense of isolation were common feelings during the lockdown period (Kimhi et al., 2020). The negative economic impact of the pandemic and the associated restrictive measures was so pronounced that the first quarter of 2020 was named ‘the Great Lockdown’, in line with the ‘Great Depression’ of the 1930s. The world GDP growth in 2020 was 3.3 percentage points lower than in 2019, whereas Italy lost almost 9 percentage points.

All over the world, country leaders extensively used direct public communication to address the nation during the first and most dramatic days of the pandemic, albeit different leaders showed different communication styles (Haan et al., 2022; Masters and ‘t Hart, 2012; Hatcher, 2020; Boin et al., 2010). On 16 March 2020, French President Emmanuel Macron delivered a mobilizing speech to the nation, invoking a war against COVID-19. Germany’s former Chancellor Angela Merkel opted for a calm and disciplined approach based on scientific evidence in a speech delivered on 22 March. At the beginning of the outbreak, former US President Donald Trump instead repeatedly downplayed the issue and blamed the World Health Organization for incompetence. In most countries, medical authorities issued daily reports on the evolution of the pandemic, which were aimed at encouraging the population to comply with health rules and obey restrictive orders. In the case of highly transmissible infectious diseases,

individual behavior and adherence to the rules directly affect collective outcomes and thus the spread of the contagion (Sobol et al., 2020; Blair et al., 2017; Briscese et al., 2020). Trust in governmental institutions is thus crucial to fostering compliance with personal protective actions and support for key public policies (Robinson et al., 2020). Public announcements to the citizens about the availability of instruments of economic relief were used to reduce fear, anger, and frustration; to limit the chances of street protests or turmoil; and, of course, to score political points. This communication effort typically follows large shocks, such as pandemics, conflicts, terrorist attacks, and large natural disasters (Dowling, 1989; Glik, 2007; Bligh et al., 2004; Connolly et al., 2020). Country leaders need to address the nation to inform citizens about the situation and to present the policy measures taken in response to the crisis.

In this article, we assess the effectiveness of early public communications about policy measures in reducing concern, fear, and anger among the population and in increasing political satisfaction with the government. We study the case of Italy, which was shocked hard and early by the COVID-19 pandemic, second only to China in its initial magnitude. Italy entered a nationwide lockdown on 9 March 2020. Containment measures were further tightened on 22 March, when all unessential productive activities were stopped, bringing to a halt a large portion of the Italian economy. Italian Prime Minister Giuseppe Conte made several public appearances on TV and social media to explain the evolution of the pandemic in Italy. On 16 March, he announced an urgent decree on economic matters. On 28 March, he detailed the economic policies about to be implemented in a joint TV appearance with the finance minister and the president of the Association of the Italian Municipalities (ANCI).

To evaluate the effectiveness of this public communication on economic measures, we used two waves of a nationally representative survey conducted in March and April 2020. These data are part of the Citizens' Attitudes Under COVID-19 Project (CAUCP), which collected public opinions on COVID-19-related issues in 11 advanced democracies (Australia, Austria,

Brazil, France, Germany, Italy, New Zealand, Poland, Sweden, the United Kingdom, and the United States) during the pandemic, using the computer-assisted web interview (CAWI) method (Brouard et al., 2022). To identify the causal effect of the Prime Minister's speech on individuals' perceptions, we exploited the fact that this announcement concerning economic policy was largely unexpected and took place on 28 March, while the first wave of our survey was still underway. We were thus able to use a quasi-experimental design and compare the answers of individuals who took the survey after the speech with those of individuals who responded before.

Our findings suggest that the TV appearance of the Italian Prime Minister was effective in improving general opinions on how the government was handling the economic crisis and in reducing anger towards the government and pessimism concerning the future, whereas it had no impact on individual perceptions concerning the handling of the health crisis. However, individuals directly affected by the economic aid provisions discussed in the speech were negatively impacted by Conte's speech. This suggests that the leader's communication was not effective in convincing the beneficiaries of the economic aid, perhaps because the proposed measures were deemed inadequate to compensate for the foreseen pecuniary losses.

Fiscal policy communication during crises

The literature on political communication and political economy has extensively studied the effects of monetary policy announcements in crisis contexts on public opinion (Roley and Walsh, 1985; Sellin; 2001; Amato et al, 2002). Official communication from Central banks and political or public authorities has been shown to have an immediate impact on households' economic confidence and saving intentions as well as market interest rates, inflation, and financial stock prices (Mertens et al., 2020; Sun, 2020; Ambler and Rumler, 2019; Ricci, 2015). Studies of the effects of fiscal policy announcements have instead been scander. A likely

explanation is that changes related to social security such as pensions, taxes, and welfare aid programs are perceived to be more uncertain and volatile due to their long-time horizon (Caplin et al., 2022), and they can thus have lower salience for citizens. However, the health and economic emergency caused by Covid-19 created a highly salient environment for communication of fiscal policy outcomes (Coibion et al, 2020), for instance concerning bonuses to help workers and families who temporarily or permanently lost their jobs because of unexpected and harsh lockdown restrictions.

This article tests the direct effect of public communication during Covid-19 on citizens' satisfaction with the fiscal policy measures adopted by the government and their level of trust and satisfaction with the government. Unlike most existing contributions, our empirical methodology proposes a quasi-experimental design that enables us to measure the causal impact of leaders' public communication on the variables of interest. This follows the literature on unexpected events during survey design (Muñoz et al, 2020; Steiner et al, 2022), which often include epidemic or pandemic events (Jensen and Naumann, 2016). Additionally, our survey data allows us to assess individuals' emotional reactions following a public speech. This constitutes an important aspect of leaders' crisis management, as citizens' personal feelings, especially negative ones such as anger and fear, are closely related to the degree of blame attribution to the government (Madera and Smith, 2009; Jin, 2014).

In crises featuring initial surprise, high levels of threat, emotional concern in the population, and media looking for breaking news, risk communication becomes crucial (Rosenthal and Kouzmin, 1997; Glik, 2007; 't Hart, 2013; Boin et al., 2010; Boin and 't Hart, 2003). In the content of their speeches, public leaders are expected to engage in an effort of *crisis sensemaking* to objectively detail the severity, address possible causes, and propose policy responses (Masters and 't Hart, 2012; Boin et al., 2009). The effectiveness of a speech depends on several characteristics, including being timely, detailing the policy response clearly and

convincingly, and explaining the chain of causality and responsibilities (Lundgren and McMakin, 2018; Reynolds and Quinn, 2008; Masters and 't Hart, 2012). Public authorities remain accountable for promoting viable solutions, even when the shock is exogenous. They might use 'lightning rod' or 'scapegoat' strategies to avoid blame (Baekkeskov and Rubin, 2017) by delegating to technical experts, such as scientific and medical advisors, the task of presenting 'bad news' and thus by attributing to them at least part of the responsibility for the crisis response ('t Hart, 2013; Boin and 't Hart, 2003, Baekkeskov and Rubin, 2017).

The communication effort should also reduce possible negative feelings regarding how leaders handle a crisis (van der Meer and Verhoeven, 2014). Indeed, positive and negative sentiments may often mediate the impact of public communication and information processing of fiscal policy, as shown also for Covid-19-related information (Faia et al, 2021). The arousal of optimistic and pessimistic sentiment plays an important role in the transmission of tax policy communication to influence citizens' expectations on economic matters and to provide a stimulus for consumption, investment, and output (Dybowski and Adämmer, 2018; Picault et al., 2022). Yet research seems to have prioritized monetary over fiscal policy outcomes also in this aspect (Galariotis et al, 2018; Masciandaro et al., 2020). We aim to contribute to reducing this gap by testing the effectiveness of leaders' communication on fiscal policy matters during the economic crisis induced by the first lockdown of COVID-19 in Italy. Our first hypothesis is as follows:

H1: Public communication by the country leader presenting fiscal policy responses to the crisis improves public opinions and reduces negative sentiment about how the government is managing the crisis.

The existing literature suggests that leaders' adherence to the standards of crisis communication affects citizens' support for public measures and their trust in and satisfaction

with the government. However, we do not expect the effectiveness of political communication to be the same among all recipients. Indeed, it is well documented that different individuals can process and evaluate the same piece of information differently (Magee and Kalyanaraman, 2009), and, for instance, mental noise theories predict that emotional involvement can cause difficulties in information processing (Baron et al., 2000). Thus, individuals who are personally involved and affected by a specific issue tend to be more distrustful of the authorities and thus less likely to accept and follow their communication (Glik, 2007). Remarkable demographic differences emerged, for instance, in citizens' responses to messages concerning correct hygienic behavior to avoid the spread of COVID-19 (Everett et al., 2020). Individuals personally affected by the crisis should be more attentive to the announcement of the economic aid package that directly targets them, and they should have a higher likelihood of elaboration (Petty and Cacioppo, 1986). Thus, they would be more engaged with the pros and cons of the fiscal policy measures and more responsive in their evaluation of the government's crisis management as opposed to individuals with a low elaboration likelihood, who tend to follow cues in the message without analyzing the specifics of the policy.

Indeed, monetary and fiscal policy announcements can have heterogeneous impacts based on various socio-demographic characteristics of the recipients, as recently confirmed also in experimental settings (Coibion et al, 2019; Armantier et al., 2016; D'Acunto et al., 2020). For the case of Covid-19, Georgarakos and Kenny (2022) use a survey experiment to investigate how public perceptions about fiscal policies and bonuses introduced during the pandemic influence households' spending patterns. They expect to observe a lower effect for those households that are not eligible for government support, yet they find no evidence of such heterogeneity. Binder (2020) uses a similar methodology to assess the impact of providing information about the decision of the Federal Reserve to cut interest rates as a response to the Covid-19 crisis on citizens' expectations about inflation and unemployment. Some of the

results are heterogeneous concerning respondents' socio-demographic characteristics and prior knowledge of the subject matter. We thus expect a heterogeneous impact of the Italian PM's speech on Covid-19 fiscal policy measures according to socio-demographic categories, in particular income and employment status, as confirmed also by the related literature on economic voting (Naumann et al., 2016; Freire and Lobo, 2005; Freire and Santana-Pereira, 2012; Jones, 2015), and we formulate our second hypothesis accordingly:

H2: The effects of public communication on fiscal policy are socio-demographically heterogeneous and more pronounced for the beneficiaries of economic aid measures

Empirical analysis

To test our hypotheses, we considered a public speech detailing the economic aid plan delivered by the Italian prime minister, Giuseppe Conte, on 28 March 2020, during the initial phase of the first lockdown in Italy.¹⁰ The first official case of COVID-19 in Italy was reported on 21 February, but in just seven days the confirmed cases escalated to more than 1,000. The first localized lockdown, with people allowed to leave their homes only to buy food and medicines, was implemented on 23 February and affected around 50,000 residents of several small municipalities in Northern Italy. On 5 March, all Italian schools were closed. Three days later, the lockdown was extended to almost all of Northern Italy and, on 11 March, to the entire country. All commercial and retail businesses, except those providing essential services, were forced to close. Italian citizens could leave their homes only by carrying out a self-declaration document for reasons of urgent necessity. On 21 March, the lockdown was hardened, leading to an almost complete shutdown of the Italian production system, which lasted until 4 May. During this difficult period, the Prime Minister addressed the nation on several occasions to

¹⁰ The full English translation of the speech is available in the Appendix.

announce restrictive measures. On 16 March, he announced an economic plan worth 25 billion Euros, and on March 28, he detailed the economic aid measures decided by the government. Figure 1 shows a timeline of the events and the Prime Minister's announcements.

Insert Figure 1 around here

The Prime Minister's speech on 28 March was largely unexpected, as it was announced to the press only approximately 45 minutes before the live broadcast.¹¹ Mr. Conte began by stating the number of people thus far infected by the virus in Italy and the number of victims. These opening remarks represent a clear example of *mortality salience* (Magee and Kalyanaraman, 2009), with death-related information and cues used to maximize persuasiveness. Mr. Conte reassured the audience that the government was carefully monitoring the contagion trends and following the recommendations of the technical and scientific committee.¹²

He then moved to the core content of the speech, which was the description of the economic measures taken by the government to counteract the negative effects of the crisis. Mr. Conte announced a prime ministerial decree that transferred a solidarity fund of 4.4 billion Euros, plus an additional 400 million, to all Italian municipalities to issue shopping vouchers for citizens in need. He also guaranteed that the public administration was making a big effort to speed up the payment of all welfare provisions. Importantly for testing Hypothesis 2, the prime minister cited the specific categories of workers who were eligible for a monthly bonus of 600 Euros, namely *'freelance workers, independent VAT collaborators, autonomous workers, artisans, merchants, direct and intermediate farmers and agricultural workers, seasonal workers and workers in tourism, thermal activities, and the show business'*.

¹¹ Source: <https://lagazzettadigitale.it/discorso-di-conte-oggi/>.

¹² The use of expert committees has often been associated with lightning rod and scapegoat strategies for blame avoidance by public leaders during crises. See Baekkeskov and Rubin (2017).

Data and methods

To evaluate the effectiveness of Mr. Conte's public communication on our outcomes of interest, we ran a real-time CAWI survey, sponsored by the Unicredit Foundation and administered by the panel company Ipsos, on a representative sample of Italian citizens. The first wave of the survey was run on 27-30 March 2020, and the second wave on 15-17 April 2020. The sample consisted of 1,000 respondents in the first wave and 997 in the second wave, of which 645 individuals were present in both surveys, constituting the panel component. Participants were recruited online and selected for quota sampling based on gender, age, occupation, and region of residence. The survey is therefore representative of the Italian population for all relevant socio-demographic variables. On average, the respondents took around 15 minutes to complete the questionnaire. Weights adjusted for standard deviation and pooling were used in the regression results.

The large set of questions asked in the survey allowed us to obtain information on individuals' perceptions and attitudes toward the way public authorities were handling the crisis. Therefore, we focused on the answers to two complementary questions: *'Do you think that the measures taken by the government to face the economic crisis are...?'* and *'Do you think that the measures taken by the government to face the health crisis are...?'*, with answers varying on a 1 to 5 Likert scale from *'very insufficient'* to *'too exaggerated'*.

We constructed the dummy variable 'Measures are not insufficient', which takes the value 1 if the individuals responded that the measures were either: i) 'neither insufficient nor exaggerated' (which occurred 352 times for the economic question and 558 times for the health question), ii) 'somewhat exaggerated' (which occurred 31 times for the economic question and 43 times for the health question), and iii) 'very exaggerated' (which occurred 8 times for the economic question and 16 times for the health question). The dummy variable takes the value 0 if the individuals responded that the measures were either: i) 'somewhat insufficient' (which

occurred 247 times for the economic question and 227 times for the health question), or ii) ‘very insufficient’ (which occurred 31 times for the economic question and 114 times for the health question). Empty and ‘I do not know’ answers were coded as missing.

We also constructed an alternative specification that takes a value of 1 only if the individuals responded that the measures were neither insufficient nor exaggerated, and 0 otherwise. This alternative variable is thus more conservative, as it refers to the perception of the measures. We used this alternative variable to check the robustness of our results. Moreover, we used the answers to the questions on individuals’ self-declared level of anger regarding the overall pandemic situation and specifically towards how the government is handling it, on a 0-10 scale from ‘none’ to ‘very high’, and to the question “*When you think about the future of your country and city, do you feel...?*” with answers 1) ‘pessimistic’, occurring 310 times, 2) ‘neither pessimistic nor optimistic’, occurring 494 times, and 3) ‘optimistic’, occurring 182 times. We thus constructed a binary variable equal to 1 whenever the answer was that the respondent felt pessimistic.

To identify the causal effect of Mr. Conte’s speech on these outcomes of interest, we exploited the fact that his TV appearance occurred during our survey, which ran from 27 March to 30 March. Mr. Conte’s speech took place on 28 March 2020 and lasted 35 minutes, from 7.35 p.m. to 8.10 p.m. In our survey, 739 individuals responded before the speech, 247 after, and 14 during the speech. The first group, which could not have been influenced by the speech, represented our control group, while the second group could have watched it and could have been affected by it. Hence, it represents the treatment group of interest.¹³ We dropped the 14 observations related to the individuals who responded during the speech.

¹³ Since we were unable to verify whether respondents answering the survey after 28 March had in fact watched Conte’s speech or read the related news, our results are to be considered as an intention-to-treat (ITT) effect. However, the audience share of the extraordinary edition of the live broadcast was very large (almost 30%), and the national attention by citizens and

The Prime Minister’s TV appearance was unplanned and largely unexpected, as it was announced to the press only approximately 45 minutes before the speech delivery. Thus, the allocation of the respondents into the two groups (treatment and control) can be considered as good as random. Table A.1 in the Appendix confirms that the two groups of respondents, answering before and after the speech, are balanced in terms of the main socio-demographic characteristics. Moreover, Figure 2 shows that the frequency of the responses does not vary abruptly around the time of Mr. Conte’s speech (highlighted as red bars in Figure 2). Had some respondents waited until the end of the broadcast to fill out the questionnaire, we would have observed an abnormal distribution of respondents right after 8.10 p.m. Hence, the smoothness of the density function in Figure 2 reassured us that individuals did not select to answer before or after the speech.

Insert Figure 2 around here

To measure the causal effect of the prime minister’s speech on the outcome variables of interest (i.e., our first hypothesis), we used the following OLS model:

$$Y_i = \alpha_0 + \alpha_1 Treated_i + \alpha_2 X_i + e_i \quad (1)$$

where the outcome variable Y_i is continuous for some outcomes (feeling of anger regarding the pandemic situation and how the government is handling it) and binary for others (government

media to the latest developments of the pandemic events was undoubtedly massive. See for reference https://www.leggo.it/spettacoli/televisione/ascolti_tv_28_marzo_2020_volano_tiggi_tg1_boom_9_5_milioni-5140294.html. Table A.3 in the Appendix shows that the results are also robust when restricting the sample to respondents answering after 9 AM on 29 March, when we assumed that the news of the speech had been widely reported by local news and the press.

economic and health measures are not insufficient and pessimism about the future of the nation). Treated is a dummy variable taking the value 1 for individuals responding to the survey after Mr. Conte’s speech and 0 otherwise. X_i is a vector of individual control variables, which include: gender, age groups (young, i.e., 18-34 years old, adults, i.e., 35-59 years old, and elderly i.e., 60+); income quartiles; education (no high school, high school, and college); occupation (blue-collar, service worker, white-collar, and no occupation); employment type (full-time worker, part-time worker, self-employed, unemployed, and out of the labor force); a dummy for self-reported health status (good or not); the self-reported number of diseases; macro-geographic areas (north-west, north-east, center, and south); political party voted in the 2018 political election (Forza Italia, Fratelli d’Italia, Lega, Liberi e Uguali, M5S, Noi Italia, PD, Potere al Popolo, no vote). Standard errors are clustered at the province level. To test our second hypothesis, our second model specification includes the interaction between the treatment variable and a binary variable Z_i defining whether an individual was directly affected by the announcement:

$$Y_i = \alpha_0 + \alpha_1 Treated_i + \alpha_2 X_i + \alpha_3 Z_i + \alpha_4 Z_i * Treated_i + e_i \quad (2)$$

Therefore, the main coefficient of interest is the interaction between the treatment dummy and the individual characteristics in vector Z_i .

To test Hypothesis 2, we defined individuals who may expect to be directly affected by the announced economic measures in two ways. First, we constructed a dummy variable ‘affected’ that identifies the direct recipients of the policy, as described in Mr. Conte's announcement. Using the Italian national statistics professional codes, we identified the following categories of affected workers: self-employed entrepreneurs of small, medium, or large enterprises; self-employed architects, engineers, merchants, artists, and scientific or healthcare professionals; workers of the farming and agriculture industry or in construction or artisans or gardeners; and

show business workers and non-qualified workers in commerce or service. Second, we considered the survey respondents who reported that they stopped working during the lockdown, irrespective of their occupational category.

Results

Table 1 presents the results for the average treatment effect of our quasi-natural experiment, described in Equation 1, using OLS.¹⁴ The Prime Minister's speech had a strong positive impact on individuals' perceptions about the adequacy of the government's economic measures. The probability of an individual considering the economic measures not insufficient increased by 11 percentage points in both specifications, without (Column 1) and with individual controls (Column 2). Moreover, the speech decreased pessimism about the future of the nation (Columns 5 and 6) and anger concerning the government's handling of the crisis (Columns 7 and 8), whereas the feelings towards the objective COVID-19 situation were not altered, as this might have been perceived not to be under government control (Columns 9 and 10).

The speech also did not affect individuals' perceptions about the adequacy of the government health measures (Columns 3 and 4), which is consistent with the fact that it mainly had an economic content. Taken together, these findings provide supporting evidence for the positive role of a leader's public communication during the crisis, as stated in Hypothesis 1. Mr. Conte's speech had a largely positive effect on individuals' perceptions regarding the economic issues, which represented the core of his message, and it managed to reduce anger towards the government and pessimism towards the future of the nation.

Insert Table 1 around here

Table 2 presents the results of the analysis, in which we tested whether the positive effects of public communication were stronger among individuals who were targeted by the announced economic measures. Workers identified as directly affected by the economic aid plan presented

¹⁴ The results are robust to the use of a logit specification for the dummy variable, as reported in Table A.2 in the Appendix.

in the speech (Column 1) are substantially less likely to deem the government measures insufficient and more likely to show pessimism about the future of the nation, whereas there seems to be no heterogeneity for what pertains to the anger measure. This result contradicts our Hypothesis 2 and suggests that these individuals might simply be unsatisfied with the magnitude of the economic aid, as they might have faced large economic losses and they are dissatisfied with the welfare policies adopted by the government and the magnitude of the compensation packages.

Insert Table 2 around here

Finally, we checked for possible heterogeneity in terms of age, gender, education, and type of profession. Table 3 shows that the effect of the speech on beliefs regarding the adequacy of the economic measures is almost null for respondents holding a college degree as opposed to lower educational levels, as the sum of the interaction term and the treated coefficient is close to zero. Column 2 shows that the heterogeneous effect seems instead to be negative for those respondents employed in white-collar professions, whereas there does not seem to be heterogeneity in terms of gender, age, or political orientation (Columns 3 to 5). Other result tables, available upon request to the authors, show that there seems to be no socio-demographic heterogeneity of any kind for the other outcome variables (anger towards the handling of the crisis and pessimism for the future of the country).

Insert Table 3 around here

Estimating persuasion rates

How persuasive was Mr. Conte's speech concerning the adequacy of the economic measures?

Following DellaVigna and Gentzkow (2010), we calculated the persuasion rate P as

$$P = 100 * \frac{y_t - y_c}{e_t - e_c} * \frac{1}{1 - y_0} \quad (3)$$

where y_t and y_c are the fractions of people (respondents) who take action, respectively, after and before the speech; hence, the difference corresponds to the average treatment effect, e_t and e_c are the fraction of agents exposed to the message under treatment and control, and y_0 is the fraction of people (respondents) who would take action in the absence of the intervention. In our setting, $e_c = 0$ and $y_0 = y_c$, as respondents in the control group answered the questionnaire before Mr. Conte delivered his speech and so they were not exposed before answering the questions. Mr. Conte's speech had an ATE equal to 0.11, and y_0 is equal to the mean of the outcome variable in the control, 0.395. Finally, we assumed that everyone in the treatment group was exposed to the content of the speech, $e_t = 1$. Hence, we have:

$$P = 100 * \frac{0.11}{1} * \frac{1}{1 - 0.396} \approx 18\% \quad (4)$$

suggesting a persuasion rate of approximately 18%. This is in line with the literature on persuading voters (DellaVigna and Gentzkow, 2010).

Replicating the analysis for the variable related to pessimism regarding the future of the country suggests a persuasion rate of approximately 13%.

$$P = 100 * \frac{0.09}{1} * \frac{1}{1 - 0.33} \approx 13\% \quad (5)$$

Robustness analysis

Our results are robust to several changes in the empirical specifications. First, Table A.2 shows that the results in Table 1 are robust to using a logit specification for the binary outcome variables. Second, Table A.3 (Columns 1 and 2) shows that the results of the corresponding columns of Table 1 are robust to modifying the definition of our outcome variable. In fact, in Table A.3 (Columns 1 and 2) we adopt a more conservative definition of the variable on the adequacy of the economic measures (see the section on Data and Methods) and obtain the same significant results and point estimates of 0.11. Third, our results are also robust to a more conservative definition of treated individuals. Table A.3 (Columns 3–8) presents the results of our linear regression model in Eq (1), in which we consider as treated individuals only those people who responded to the survey after 9 a.m. on 29 March, i.e., the morning after Mr. Conte’s speech. Since the content of the speech was largely reported in the news, we expected these individuals to be more likely to have been exposed to the treatment. The findings presented in Table 1 are also confirmed in this sample: being exposed to the treatment increases the perception that the economic measures are not insufficient and reduces anger towards the government and pessimism towards the future of the nation.

We also performed other robustness checks as in Muñoz et al (2020). Figure A.1 shows the plot of the coefficients for the variables on the adequacy of the economic measures, pessimism towards the future of the nation, and anger towards the government using the real treatment dummy and two placebos. These are artificially set at 9.44 AM and 3.13 PM on March 28th to have approximately 75% and 50% of the respondents ‘treated’, and none of the placebo coefficients is significant.

Finally, we provided further evidence of the robustness of our results by integrating data with the second wave of the survey, run on 15–17 April 2020. By mid-April, all respondents should have been fully aware of the content of Mr. Conte’s speech delivered on 28 March. Hence, we

did not expect to find any difference in the responses registered in April between treated individuals (i.e., those who answered the March survey after Mr. Conte's speech) and untreated individuals (who answered before the speech). Indeed, the results in Table A.4 (Column 1) confirm that there is no difference between these two groups of respondents; the point estimate is 0.003.

However, if we select the same sample of individuals who responded to the question on the economic measures in both surveys and consider their responses in the first survey, we should expect a difference to emerge, as shown in Table 1, for the entire sample of respondents to the March survey. Table A.4 (Column 2) confirms this finding: the point estimate is 0.10, in line with the estimate for the entire sample (0.11), although the estimate is not statistically significant at conventional levels, perhaps due to the reduced number of observations. Columns 3 and 4 replicate the analysis with the outcome variable on pessimism concerning the future of the country, with analogous results.

Discussion

Public communication is crucial during crises. The public needs to be informed about the existing risks and the crisis management measures implemented by the government. In a period of great uncertainty, this communication should aim to reduce negative feelings about the situation, induce citizens to follow safe and correct behavior, and maintain (or restore) confidence and trust in the authorities and the government. Public communication has to be timely, precise, and credible; important decisions have to be made about the message to be conveyed, as well as the tone and narrative to be used. This is particularly true for fiscal policy communication, which is often less salient to citizens than other types of public communication on economic matters, and for which the persuasiveness of the message can vary according to its formulation and to the personal characteristics of the audience.

We studied public communication about the fiscal aid measures taken during the first wave of COVID-19 by the Italian government to respond to the economic crisis caused by the lockdown (March 2020). We analyzed a crucial public speech by Italian Prime Minister Giuseppe Conte announcing the economic aid measures proposed by the government. We used novel survey data from a cross-country project and exploited the fact that the speech was delivered while the survey was underway. Since the prime minister's TV appearance was unexpected, we were able to compare the answers of respondents who took the survey before and after the live broadcast.

Our findings showed that the communication from the prime minister was effective in improving the general opinion on how the government was dealing with the economic crisis caused by the pandemic and in reducing anger towards the government and pessimism concerning the future of the nation. However, this was not true for the respondents who were targeted by economic aid, for which we observed a negative effect of the speech, as they might

have expected more generous economic aid. The internal validity of our findings is guaranteed by the quasi-random treatment assignment and confirmed by several robustness checks in line with the literature on unexpected events during survey designs. However, more studies are needed to confirm the external validity of our results with a comparative analysis of other speeches delivered by the Italian Prime Minister, as well as by other country leaders in similar circumstances. Likewise, it could be promising to explore, in an experimental setting, the underlying cognitive mechanisms behind the different impacts of specific messages on individuals affected by a crisis to different degrees. More research on leaders' speeches would help politicians and policymakers to formulate convincing messages to increase the persuasiveness of public communication in times of health and economic crises.

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Tables and figures

Figure 1. Timeline of COVID-19 events and PM speeches in Italy (Winter 2020)

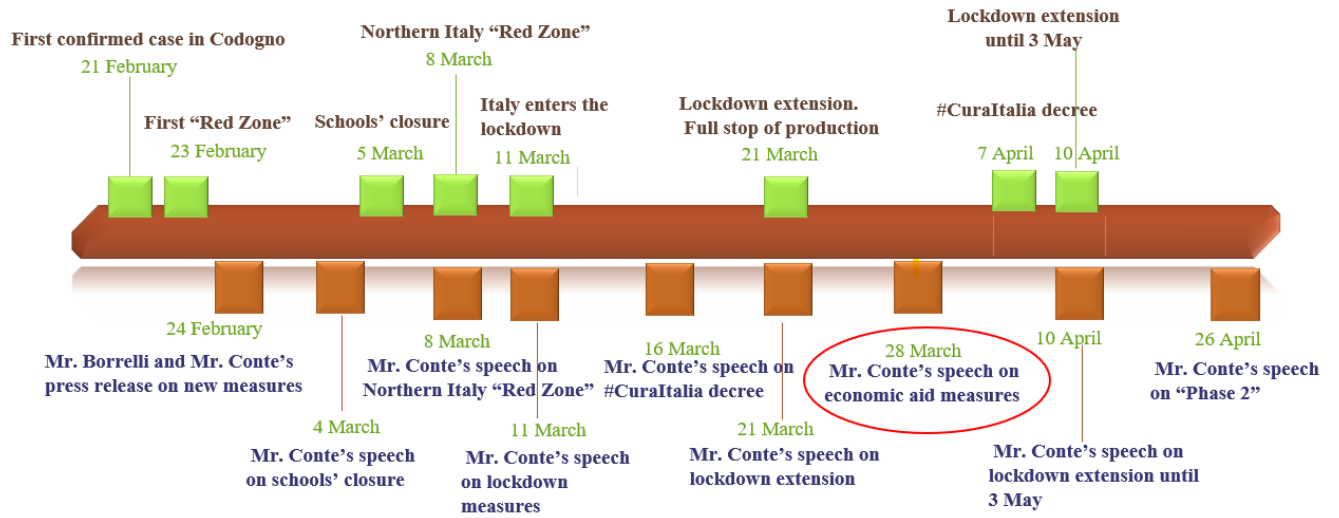


Figure 2. Time distribution of interview response on 28 March 2020 (red bars indicate the moment of the speech)

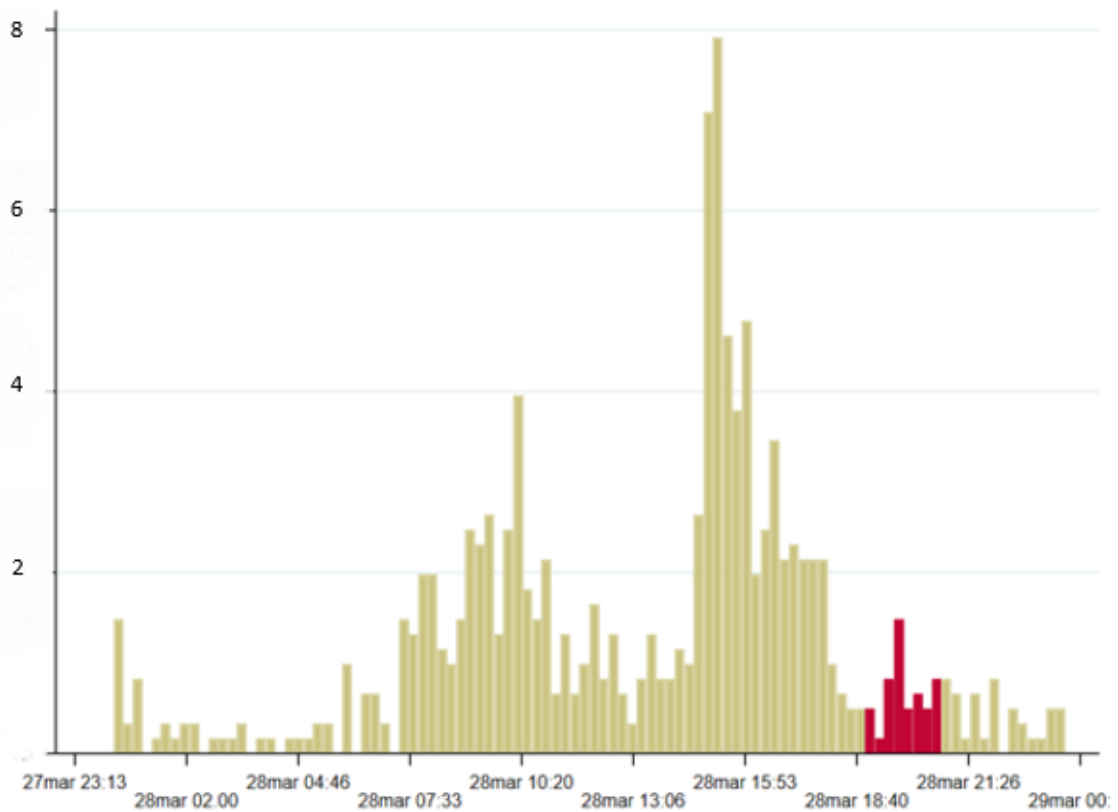


Table 1. Effect of 28 March 2020 speech - OLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Economic measures	Economic measures	Health measures	Health measures	Pessimism Future	Pessimism Future	Anger government	Anger government	Anger Covid	Anger Covid
Treated	0.111*** (0.036)	0.114*** (0.035)	0.039 (0.040)	0.038 (0.037)	-0.090** (0.038)	-0.076** (0.037)	-0.750*** (0.242)	-0.666*** (0.225)	-0.272 (0.192)	-0.231 (0.187)
Variable mean	0.42	0.42	0.63	0.63	0.31	0.31	5.42	5.42	6.21	6.21
Individual Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Constant	0.382*** (0.019)	-0.194 (0.138)	0.609*** (0.020)	-0.459*** (0.134)	0.343*** (0.020)	1.177*** (0.157)	5.717*** (0.104)	9.948*** (1.942)	6.361*** (0.113)	10.836*** (1.361)
<i>N</i>	931	931	958	958	986	986	986	986	986	986
Adj. <i>R</i> ²	0.382***	0.107	0.001	0.132	0.0068	0.0867	0.011	0.164	0.001	0.122

Standard errors in parentheses and clustered at the province level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2. Heterogeneous Effects of the Speech - OLS

	(1)	(2)	(3)	(4)	(5)	(6)
	Economic measures	Economic measures	Pessimism future	Pessimism future	Anger Government	Anger Government
Treated	0.123*** (0.035)	0.119*** (0.038)	-0.092** (0.036)	-0.094** (0.038)	-0.688*** (0.215)	-0.746*** (0.243)
Affected	-0.100 (0.099)		-0.051 (0.099)		0.363 (0.660)	
Affected* Treated	-0.336*** (0.118)		0.399** (0.177)		0.169 (0.884)	
Stopped working		-0.036 (0.051)		0.078 (0.056)		-0.301 (0.323)
Stopped working* Treated		-0.069 (0.080)		0.098 (0.094)		0.310 (0.534)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.198 (0.136)	-0.205 (0.139)	1.176*** (0.157)	1.191*** (0.170)	9.956*** (1.941)	9.980*** (2.028)
<i>N</i>	931	931	986	986	986	986
Adj. <i>R</i> ²	0.016	0.017	0.091	0.092	0.177	0.178

Standard errors in parentheses and clustered at the province level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3. Heterogeneous Effects of the Speech - OLS (2)

	(1) Economic measures	(2) Economic measures	(3) Economic measures	(4) Economic measures	(5) Economic measures
Treated	0.163*** (0.0397)	0.130** (0.0626)	0.0532 (0.0453)	0.113*** (0.0342)	0.105** (0.0496)
College	0.0863** (0.0402)	0.144 (0.110)	0.0656 (0.0646)	0.0761 (0.0656)	0.0872 (0.0648)
College* Treated	-0.195*** (0.0709)				
White-collar	-0.0101 (0.0611)	0.0735 (0.0598)	-0.00664 (0.0630)	0.00108 (0.0567)	0.00644 (0.0684)
White-collar* Treated		-0.257** (0.122)			
Male	-0.0217 (0.0323)	0.0406 (0.0444)	-0.0501 (0.0354)	-0.0244 (0.0310)	-0.0232 (0.0321)
Male*Treated			0.125 (0.0769)		
Young	0.0213 (0.0777)	-0.175 (0.114)	0.0295 (0.0817)	0.0205 (0.0896)	0.0501 (0.0798)
Young* Treated				-0.0851 (0.162)	
Fivestar or Lega Nord					-0.0711* (0.0400)
Fivestar or Lega Nord * Treated					0.0218

	(0.0702)				
Individual controls	Yes	Yes	Yes	Yes	Yes
Constant	-0.192 (0.141)	-0.198 (0.223)	-0.173 (0.138)	-0.177 (0.137)	0.234* (0.125)
<i>N</i>	931	503	931	931	931
Adj. <i>R</i> ²	0.082	0.136	0.078	0.075	0.028

Standard errors in parentheses and clustered at the province level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix

Additional tables and figures

Table A.1 Balance of treatment and control groups and summary statistics – Explanatory variables

	Control group		Treatment group		p-value
	Mean	N	Mean	N	
	(SD)		(SD)		
Young	0.054	739	0.060	247	0.695
	(0.226)		(0.239)		
Male	0.489	739	0.437	247	0.153
	(0.500)		(0.497)		
Adult	0.755	739	0.765	247	0.748
	(0.497)		(0.424)		
North-west	0.271	739	0.275	247	0.919
	(0.445)		(0.447)		
North-east	0.201	739	0.218	247	0.567
	(0.401)		(0.414)		
Center	0.199	739	0.170	247	0.318
	(0.399)		(0.376)		
South	0.224	739	0.206	247	0.551
	(0.417)		(0.405)		
High school	0.580	739	0.583	247	0.945
	(0.493)		(0.494)		
College	0.323	739	0.336	247	0.714
	(0.468)		(0.47)		
Income 1st percentile	0.254	739	0.206	247	0.12
	(0.436)		(0.40)		

Income 2nd percentile	0.307	739	0.295	247	0.731
	(0.462)		(0.457)		
Income 3rd percentile	0.092	739	0.101	247	0.668
	(0.289)		(0.302)		
Income 4th percentile	0.200	739	0.210	247	0.728
	(0.400)		(0.408)		
Part-time worker	0.106	739	0.158	247	0.032
	(0.309)		(0.365)		
Self-employed	0.086	739	0.060	247	0.195
	(0.281)		(0.239)		
Unemployed	0.148	739	0.089	247	0.017
	(0.356)		(0.285)		
Out of LF	0.005	739	0	247	0.247
	(0.073)				
Service worker	0.278	739	0.283	247	0.888
	(0.448)		(0.451)		
Good health	0.948	739	0.947	247	0.940
	(0.221)		(0.223)		
N. of diseases	0.314	739	0.271	247	0.432
	(0.750)		(0.706)		
White-collar	0.107	739	0.097	247	0.665
	(0.309)		(0.297)		
Blue-collar	0.144	739	0.182	247	0.159
	(0.352)		(0.387)		
Service worker	0.278	739	0.283	247	0.888
	(0.448)		(0.451)		
Forza Italia	0.0432	716	0.033	239	0.507

	(0.203)		(0.180)		
Fratelli Italia	0.0391	716	0.037	239	0.920
	(0.193)		(0.190)		
Lega	0.187	716	0.188	239	0.969
	(0.390)		(0.391)		
Liberi e Uguali	0.0307	716	0.	239	0.601
	(0.17269571)		(0.190)		
Five Star Movement	0.252	716	0.280	239	0.400
	(0.434)		(0.450)		
Noi Italia	0.002	716	0	239	0.414
	(0.052)				
No vote	0.195	716	0.159	239	0.209
	(0.39)		(0.366)		
PD	0.174	716	0.184	239	0.738
	(0.379)		(0.388)		
Potere al Popolo	0.0181	716	0.012	239	0.559
	(0.133)		(0.111)		

Table A.2 Effect of March 28th speech – Logit specification

	(1) Economic measures	(2) Economic measures	(3) Health measures	(4) Health measures	(5) Pessimism Future	(6) Pessimism Future
Treated	0.108*** (0.034)	0.104*** (0.032)	0.039 (0.041)	0.035 (0.038)	-0.093** (0.041)	-0.078** (0.039)
Individual Controls	No	Yes	No	Yes	No	Yes
<i>N</i>	931	929	958	952	986	964
Pseudo- R ²	0.007	0.084	0.001	0.098	0.0056	0.0683

Standard errors in parentheses and clustered at the province level. Marginal coefficient estimates. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.3 Effect of March 28th speech – robustness checks (OLS)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Econ omic meas ures	Econ omic meas ures	Econ omic meas ures	Econ omic Meas ure	Pessi mism Future	Pessi mism Future	Anger Govern ment	Anger Govern ment
Treat ed	0.116 ***	0.114 ***	0.106 **	0.117 ***	- 0.092*	-0.070	- 0.676**	- 0.624**
	(0.03 5)	(0.03 4)	(0.04 3)	(0.04 3)	(0.042)	(0.044)	(0.264)	(0.249)
Indivi dual contr ols	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	892	866	874	848	928	928	928	899
<i>R</i> ²	0.009	0.075	0.006	0.067	0.006	0.088	0.007	0.125

Standard errors in parentheses and clustered at province level. Columns 1 and 2 use the alternative specification of the economic measures variable which equals 1 only if the individuals responded that the measures were neither insufficient nor exaggerate and 0 otherwise. Columns 3 to 8 restrict the sample to the individuals responding after 9 AM on March 29th* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure A.1 Treated and placebo coefficient graphs

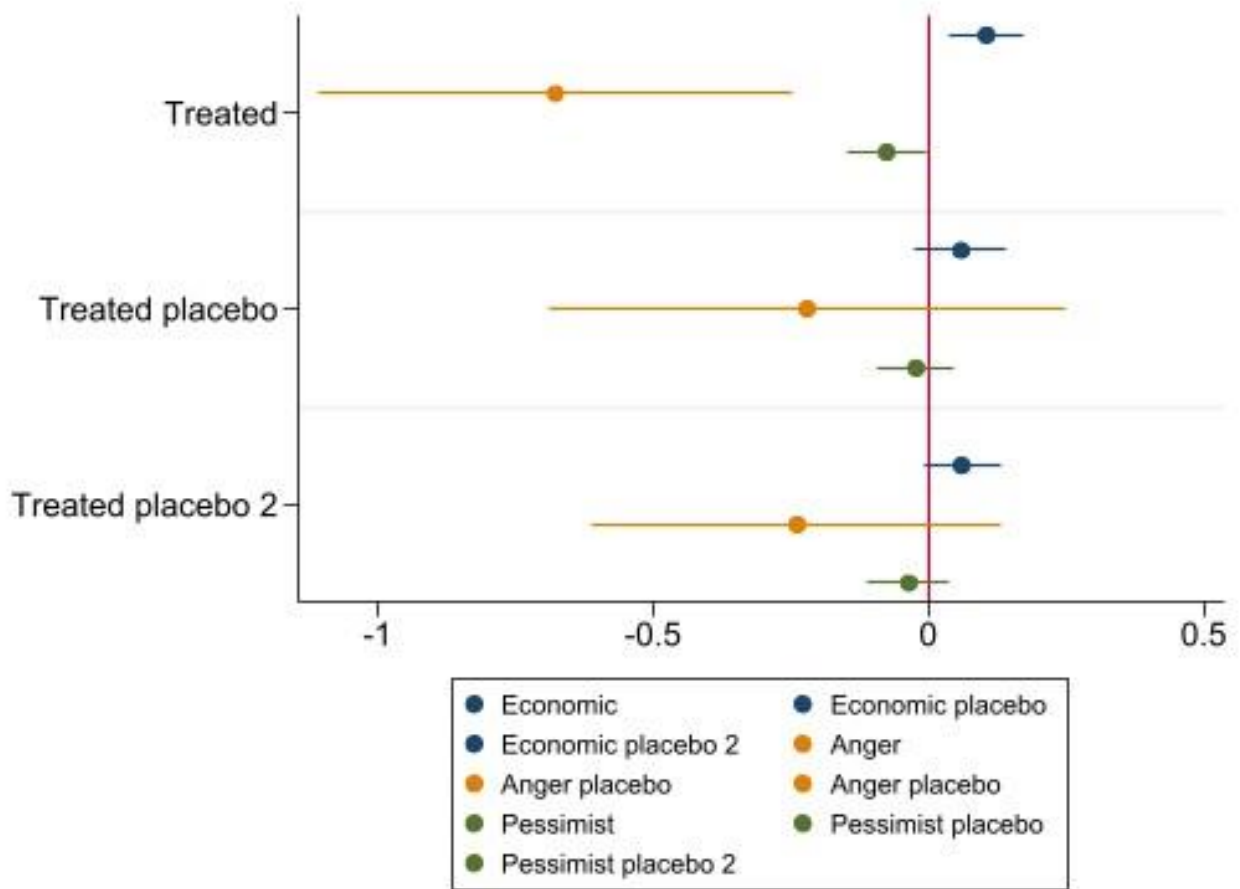


Table A.4 Panel results - OLS

	(1)	(2)	(3)	(4)
	Economic measures 2	Economic measures	Pessimism future	Pessimism future 2
Treated	0.003 (0.081)	0.098 (0.071)	-0.069 (0.044)	-0.051 (0.042)
Constant	0.406*** (0.041)	0.379*** (0.032)	0.362*** (0.022)	0.355*** (0.023)
Individual controls	Yes	Yes	Yes	Yes
<i>N</i>	293	293	637	637
<i>R</i> ²	0.01	0.000	0.003	0.002

Standard errors in parentheses and clustered at the province level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

*Integral translation of Mr. Conte's speech of March 28th 2020.*¹⁵

‘Good evening, everyone. Today we register 10,000 victims, we have exceeded 10 thousand victims. It is a number that particularly strikes us as the wound in our national community is widening, and it is a wound that we will never be able to forget. So, first of all, please allow me to address a moving thought and all the feelings of the closeness of the government, but I believe and I am sure I interpret all the Italians, to the victims and their families.

There is another fact that at the same time encourages us: today we report 1,434 healed people, it is the highest number so we will now discuss it with scientists, with our experts, and with the technical-scientific committee, and we trust that they will bring us some good news. We always remain vigilant and careful to adjust our assessments based on their recommendations. Today we also want to give the sign of the concrete presence of the State. I said this in the past few days, the State exists. There are many citizens in difficulty, I would like to tell them that we are not turning our faces away, we are absolutely aware that at this moment there are many people who suffer, they are psychologically suffering, and we realize that not all of us are used to being at home, they were not used to stay at home and limit travel. But there are also many material sufferings of those who are also beginning to have some difficulties or already had it concerning food procurement or pharmaceutical products.

From here, with Minister Gualtieri and with all the other ministers in our structures, we have worked, we have worked intensely to immediately launch a measure of great urgency, of great impact. We involve the municipalities, and the Mayors, the Mayors are our sentinels, our first sentinels, the first antennas regarding the local communities as regards the needs of

¹⁵ Square brackets correspond to the omitted interventions of Mr. Gualtieri (former Minister of Economy) and Mr. De Caro (president of the Association of Italian Mayors).

the citizens. So, we rely on them, we have them, and we have just signed a DPCM that provides them with the sum of 4.3 billion from the municipal solidarity fund, an advance of 66 percent that we turn to the Municipalities. We do it before the deadline which was scheduled for May, but beyond this, perhaps the most important thing is that now it's about citizens. Alas, many citizens who are listening are in great difficulty, and with a civil protection order, we add 400 million to this fund.

This 400 million is a further advance that we allocate to municipalities with the constraint of using these sums for people who don't have the money for grocery shopping. So, from these 400 million, which will be distributed by all 8 thousand municipalities of our territory, we will create shopping vouchers, enabling to supply to the community basic necessities, and foodstuffs with the solidarity chain, with the civil services and the entire voluntary service chain of the third sector. We, therefore, trust that the mayors will be in the condition, since the beginning of next week, to concretely provide these shopping vouchers, or even to directly deliver grocery items, and foodstuffs to needy people, through social services, voluntary associations, and the third sector. We do not want to leave anyone alone, abandoned to himself, especially at a time when the entire national community is so suffering and there is therefore even more acute suffering. We are, I said, we are all in the same boat, we are all experiencing this discomfort, these sacrifices, and we must help those who are in greater difficulty at this moment. This chain of solidarity is also the reason why in the civil protection ordinance we have also foreseen strengthened measures to encourage donations. Donations, therefore, also from producers and distributors. We do not want to tax solidarity, and on the contrary, I also appeal to large retailers so that they can add a 5 percent, or even a 10 percent discount to those who buy with these vouchers. I add one last piece of news and then I leave the floor to Minister Gualtieri. We are working hard, we are working intensely

because with Minister Catalfo, in particular, whom I thank, with the INPS, the INPS offices, and President Tridico, because clearly, we have launched some measures and now it is important that the measures allocated (the important measures, we are talking about 25 billion allocated with the Cura Italia decree) immediately reach the pockets of families, businesses and citizens. You see it is not easy, but I want to clarify it because we are talking about sixteen measures of different types for about 10 billion, it is an audience of 11 million people. We are doing everything to ensure that the bureaucracy, the ordinary times of the bureaucracy we are used to, can be not only halved, but I would like to say even zeroed. On this I am inflexible, and I must say that the offices and INPS are working hard, so we want that all of those who are entitled to the ordinary and derogation layoffs are put in the condition to benefit from the sums to which they are entitled in the shortest possible time. A great effort is to ensure that all these payments are formalized possibly by April 15, despite the times that have been indicated by law, and, if possible, even earlier. This, therefore, applies to ordinary layoffs, layoffs in derogation and the various bonuses: 5 compensation bonuses of 600 euros that benefit freelancers, coordinated and continuous collaborators enrolled in the separate management of INPS, self-employed workers, artisans, traders, settlers, direct farmers, sharecroppers, seasonal workers, workers of tourism, SPAs and agricultural and entertainment establishments. All of these are entitled to a bonus referring to the month of March. We are doing everything to enable them to submit the application on April 1st, with a simple and simplified pin on the mobile phone which shall be downloaded by connecting to the INPS portal, so that through the help of patronages and call centers it will be possible to immediately obtain the availability of these sums. Then there are also modalities, how to say, accelerated bureaucratic paths to enjoy new Covid-19 parental leave and also modules, very rapid paths for companies. I ask you to understand this effort, the

state machine unfortunately requires complex procedures and modalities, we are really doing the impossible to eliminate them. Thanks Minister Gualtieri.

[..]

Thank you, Minister. The mayor of Bari is also in connection with us, Antonio De Caro, who is the President of the national association of municipalities (ANCI). I thank you because the dialogue with them, with the ANCI, was, as Minister Gualtieri anticipated, essential to finalize this measure of rapid intervention that will have to serve us to intervene in favor of the people who are struggling the most. In the upcoming, therefore, the ANCI will be fundamental, and we will distribute this sum with criteria that now president De Caro will anticipate. And obviously, we have already agreed it will be essential to involve not only the social services that usually work with the municipalities but also the whole chain of the third sector of voluntary organizations of social promotion and all the associative structures that are, let's say, the beating heart of solidarity. And Italy... From this point of view, we are convinced that this organizational machine will demonstrate, how it has always been able to do and historically knows how to do, incredible operational effectiveness.

[..]

Thank you, President De Caro. Please, I take this opportunity here to thank you, really, all the mayors. I have defined you as the first sentinels, the outposts of the territory, the first antennas and from this point of view I know in this emergency phase how you are exposed because by reason of the proximity, of the close contact you have with citizens, you directly collect their complaints, their complaints their needs, so your help is absolutely essential, thank you very much.'

Concluding remarks

What do we learn from this dissertation?

How can it be informative of academic research and policymaking?

Reorganization in public administration is an expression of bureaucratic and institutional politics, as well as a response to crises. Public leadership can also exert pressure on citizens' perceptions of crises, building political capital for institutional politics and creating room for reform. However, when politically construed, such reforms need not increase system efficiency or performance, and they can even be counterproductive.

The three essays of this dissertation address critical issues in the scholarship of public management and reorganization using a diverse range of research methodologies. The first essay conducts a systematic review of the literature on reorganization in the public sector to provide a clearer theoretical picture of its definitions and determinants. It discovers that political considerations are virtually always behind explanations based on efficiency, managerial rationality, and reactions to external crises, although public administration and political science scholars have rarely spoken with each other to discuss these issues. The review also highlights a surprising lack in the use of mixed methods to understand the problem of reorganization, which is expected to overcome the limitations of qualitative or quantitative-only approaches. The second essay of this dissertation attempts to do precisely this. Indeed, it seeks to uncover the 'bureaucratic politics' behind the efficiency argumentation promoting public health mergers, and it does so by combining a staggered difference-in-difference analysis of quantitative indicators for financial and quality of care outcomes with a qualitative analysis of semi-structured interviews with managerial figures of merged agencies. The combination of the two methodologies enables quantifying a causal effect as well as grasping the mechanisms behind the observed results, some of which go against the expectations of the

literature. Finally, the third essay exploits a fortuitous quasi-natural experiment to assess the causal impact of leaders' public communication concerning the measures taken by the government to counteract a health and economic emergency. As such, it speaks to the literature on blame management following crises, as these can trigger reorganization efforts or result from poorly conceived reorganization reforms.

What these essays teach us is that there can be room for improving the design and targeting of reorganization reforms and welfare aid programs as a response to crises, since we observe frequent mismatches between stated goals and effective results. Indeed, Essay 2 highlights a limited realization of cost savings and performance improvements following the mergers of public health agencies, whereas Essay 3 shows that fiscal policy measures proposed to face the Covid-19 recession did not convince the targets of these measures.

Improving the design of public reforms thus requires a more comprehensive understanding of the theory behind them, as Essay 1 advocated; and by taking stock of interdisciplinary and cross-country comparisons from the past and adopting the new methodologies that have been developed in recent years there is still a lot that policymakers can learn from academic research and vice versa.