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Decentralization, policy capacities, and varieties of first health response to the COVID-19 outbreak: evidence from three regions in Italy

Gilberto Capano and Andrea Lippi

ABSTRACT

Effective response to a pandemic depends not only on national dynamics and characteristics but also on the features of a country's political and administrative decentralization and on the organizational capacities of the health system. As a result, different policy capacities can be present in the same national health system, and this variance allows us to understand local policy actions and their outcomes. Based on this assumption, this paper compares the process and the content of the initial policy response in three Italian regions (Lombardy, Veneto, and Emilia-Romagna). These three regions simultaneously experienced the most intense diffusion of infections and adopted very different strategies to mitigate the transmission of the virus. Our comparison reveals how the characteristics of Italy's decentralized health system and the consequent differentiation in terms of health policy capacities have clearly driven very different regional first health policy responses and outcomes with regard to dealing with the spread of COVID-19.

KEYWORDS COVID-19; policy capacity; Varieties of responses; decentralization; Italy

Introduction

Decentralization and the capacities of health systems have had central roles in the emergency response to the COVID-19 outbreak. The organizational capacities of the health system have been key in contrasting the diffusion of the disease and in implementing effective strategies to limit infections. Additionally, it is well known that the most effective strategy for responding to the explosion of a pandemic is a community- and home-based approach, as opposed to a hospitalization- and patient-based approach (Madhav et al., 2017; Legido-Quigley et al., 2020). The evidence in this regard particularly matters where health policy systems are decentralized at regional/local levels.

Hence, to understand the reasons for and actions constituting regionally differentiated practices, this paper contributes by focusing on health system decentralization and policy organizational capacities in a comparison of the management of the COVID-19 outbreak in three regions in Italy (Lombardy, Veneto, and Emilia-Romagna). All three regions (the wealthiest in Italy) simultaneously experienced the most intense diffusion of infections but, with no relation to the political orientation of their governments, adopted very different strategies to mitigate the transmission of the virus.

The paper scrutinizes the ‘first response’ in managing the pandemic crisis, to understand why and how three different strategies of mitigation have been pursued notwithstanding national guidelines. The comparison reveals how the decentralized institutional arrangements of Italian health policy and, relatedly, the high organizational autonomy in healthcare delivery left in the hands of the regions have produced different outcomes: disastrous in Lombardy, good in Emilia-Romagna, and innovative and highly effective in Veneto. The paper is structured as follows. Section two presents the research question and the theoretical argument on decentralization and the organizational policy capacity of health systems as the main drivers of regional first responses to crises. Section three presents the empirical evidence obtained by comparing the three analysed regions. Section four discusses the theoretical, analytical and operational implications emerging from the empirical analysis. The conclusion offers some ideas for further research.

Decentralization and the organizational capacity of health systems in crisis management

The research question

When an (unexpected) crisis disrupts normal policy-making and there is no real preparation to cope with the new challenge, crisis management becomes an unexplored territory that places terrible strain on all the major institutional and policy characteristics of a specific country. In the case of the COVID-19 pandemic, because of the need to organize a response to mitigate the spread of the virus and prevent hospitals from being overwhelmed, in every country, governments have been pushed to establish specific health protocols and procedures and to institute specific regulatory measures to mitigate and possibly stop the diffusion of the virus (Capano et al., 2020; Blavatnik School of Government, 2020).

However, in every country, the implementation of these measures has worked based on the institutional design and the organization of the health system. Therefore, the outcomes in the same country can differ from one territory to another based on the level of centralization/decentralization of healthcare delivery and its content.

Italy offers an ideal case for studying how entities in the same country can react divergently in a context of high decentralization. The focus on the Italian case is motivated by the empirical evidence that, as shown in Figures 1–4, the three most seriously affected regions (Lombardy, Emilia-Romagna, and Veneto) performed very differently during the first months of the pandemic. Three output and outcome indicators are used: (i) the number of hospitalizations (with symptoms and in ICU beds) per 1,000 inhab., (ii) the number of swabs per 1,000 inhab. (iii) and the number of deaths per 1,000 inhab. The first and the second are output indicators, while the third is an outcome indicator.

As the figures show, Veneto has been very effective in managing the crisis in terms of both output and outcome. Lombardy has been unsuccessful for months in its efforts against the outbreak: the number of deaths is well beyond twice that in Veneto, and the hospitalization rate is also higher (triple that in Veneto during the first month of the outbreak). Additionally, the number of swabs is low. Emilia-Romagna stands in the middle (the number hospitalized with symptoms was double that in Veneto, but the number of deaths was much lower).

To explain this variation, many factors can be considered, such as the difference in size among regions (with Lombardy being more than double the size of the other two regions), the possible different timings and speeds of the progression of the contagion curve, and the difference in the transmission pattern.¹ However, the influence of these factors can be considered depending on the characteristics of healthcare delivery and the

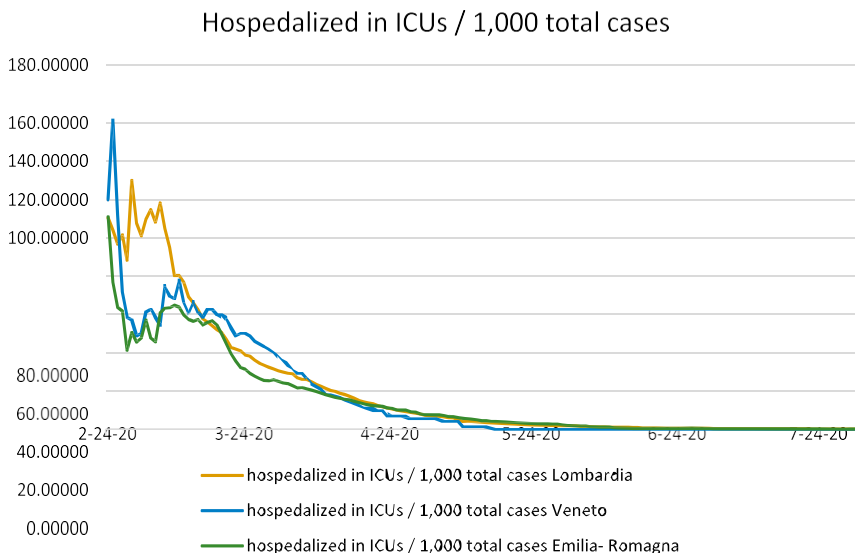


Figure 1. Number hospitalized in ICUs per 1,000 cases.

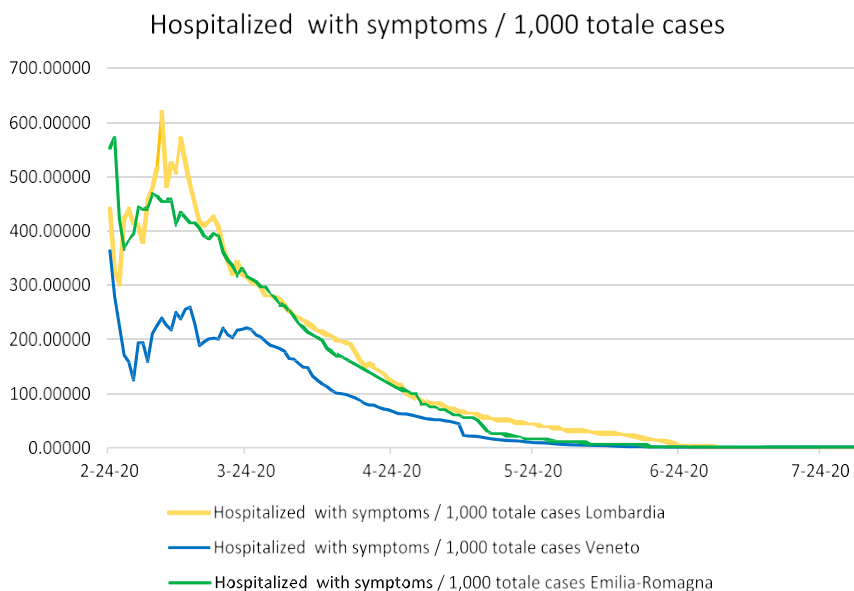


Figure 2. Number hospitalized with symptoms per 1,000 cases.

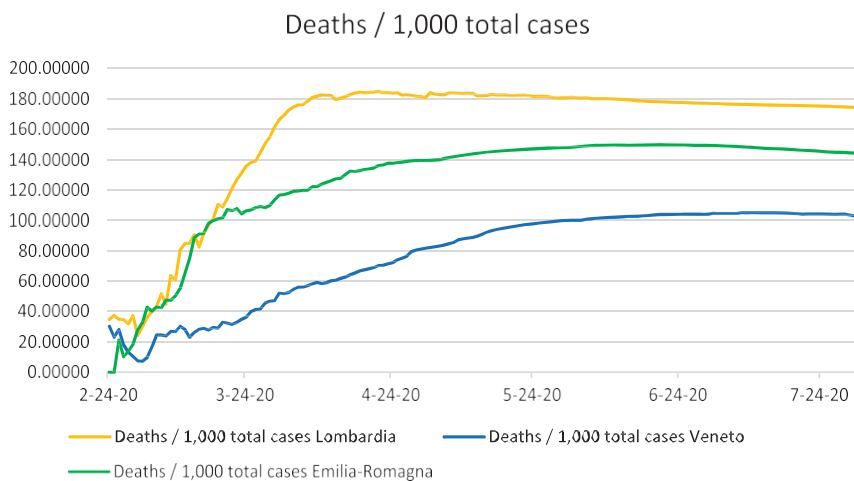


Figure 3. Number of deaths per 1,000 cases on average between 20 February and 31 July 2020.

capability of delivering a proper response strategy. The adequacy of the response to the ‘unexpected’ is closely connected to the organizational characteristics of the health systems and related institutionalized practices (which can support or hinder coordination, learning and the positive contribution of single individuals).

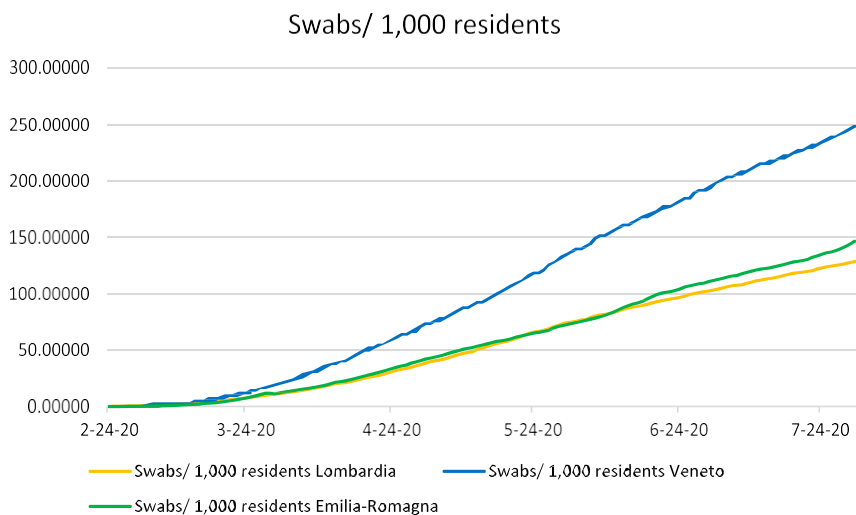


Figure 4. Number of swabs per 1,000 residents, 20 February-31 July 2020.

From a public policy perspective, understanding why these different strategies have been pursued at the regional level is challenging. Thus, taking into account the specificity of the issue at hand, the crisis management of a pandemic, two factors can be considered particularly relevant in explaining the first response choices of regions: the type of decentralization (in terms of the distribution of powers and competences in health policy) and organizational policy capacities of the health systems.

The double-sided nature of healthy policy decentralization

Despite the considerable analytical attention given by scholars and others to national responses to the COVID-19 crisis, there is a risk of overlooking the differences in the way this response has operated in different parts of the same country, regardless of the form of the State. To understand whether and how there can be intra-country differences in the effectiveness of the response to a serious crisis such as a pandemic, it is necessary to better understand how the institutional arrangements of health systems are designed and how specific policy capacities work.

Regarding decentralization, its relevance has been depicted in various streams of literature, mainly organizational theory, crisis management, and comparative health policy. Decentralization is a disputed issue in terms of the related matters of coordination/cooperation and implementation. From the organizational perspective, the ways in which the organizational arrangements of a policy field are designed matter for structuring policy-making (Egeberg & Trondal, 2012) as well the coordination

challenges (Christensen et al., 2016). In the case of health policy, these two dimensions are particularly relevant, depending on the various possible levels of decentralization and because the centralized and direct implementation of healthcare delivery is very rare from a comparative perspective (European Union Committee of the Regions, 2017; OECD 2019). For example, we know that the institutional arrangements of health policy are not necessarily linked to the form of the state (unitary vs federal) and that they are frequently organized based on an indirect territorial implementation (Egeberg & Trondal, 2012). Consequently, the decision space (Marchildon & Bossert, 2018) of local/state governments in ruling and/or managing healthcare delivery is high not only in federal countries (such as Canada, Germany, Australia, Austria, and the United States) but also in regional states such as Spain and Italy and even in unitary countries (such as the United Kingdom, Denmark, Norway, and Sweden) (Saltman et al., 2007; Bernal-Delgado et al., 2018; Toth, 2015; European Committee of the Regions, 2017).

Thus, the characteristics of the institutional design of decentralization are very relevant for health policy because they pre-structure the possibility of significant variations in outputs and outcomes, all the more so in the case of a pandemic. Thus, it can be assumed that the higher the level of political and administrative decentralization is, the greater the possibility of different sub-national healthcare policy designs (Schneider, 2003; Mitchell & Bossert, 2010) and, thus, the greater the variety of responses to an unexpected crisis.

In the case of highly decentralized health systems, we can assume that the coordination challenge is double-sided: on the one hand, there is the problem of central coordination, while, on the other hand, there is the challenge of coordinating the sub-national healthcare systems. Therefore, the way decentralization functions in crisis management depends on the way coordination and cooperation between different levels are designed formally and operate in reality (Kett, 2003; Boin & Bynander, 2015). Multilevel cooperation and coordination are necessary to agree on what should be done and to ensure effective implementation across the national territory. However, in the case of the pandemic, because the first response is substantially made by the healthcare system, the level of decentralization in the healthcare system entails potentially conflicting outcomes. In fact, from a crisis management perspective, although the most recent literature emphasizes that community involvement (Stark & Taylor, 2014), the intrinsically networked nature of governance arrangements (Moynihan, 2009), and the resilience and capacity of decentralized actors matter considerably in crisis management (Boin et al., 2018), high decentralization in the healthcare system can structure different capacities in local health systems that cannot be easily modified by national governmental coordination when a pandemic explodes.

Policy capacities

When designing policy and then responding to a crisis, the quality of the policy design and impact depends on the policy capacities at the disposal of decision makers (Painter & Pierre, 2005; Gleeson et al., 2009; Legge et al., 2011).

Policy capacities can be understood as ‘the set of skills and resources—or competences and capabilities—necessary to perform policy functions’ (Wu et al., 2018, p. 3). Skills and competences can be analytical, operational or political, while resources/capabilities are embedded at the individual, organizational and systemic levels.

Table 1 shows how these two dimensions of policy capacity interact with each other.

This framework can be quite useful for better understanding how policy capacities in health policy are structured and function effectively in reacting to a pandemic. The organizational level is certainly the most relevant because its characteristics are fundamental for analysing a problem, such as the diffusion process of pandemics, and thereby contribute to the design and implementation of the response (Gleeson et al., 2009). In fact, at the organizational level:

- the analytical capacity is fundamental in gathering, in the proper way, the needed information about how the virus is spreading;
- the operational capacity concerning the governance of healthcare delivery (the mode of organization of services and activities, the type of coordination, the inter-organizational relations) is essential to truly stop the diffusion of the virus;
- the political capacity is essential to give the healthcare delivery system the necessary political legitimacy and ability to be heard by policy-makers and stakeholders that will allow healthcare actors to work in a cooperative environment.

Thus, we assume that the different organizational capacities of the health-care delivery system matter when there is an urgent need to stop the diffusion of a pandemic, especially during crisis management.

Same country, different responses: crisis management in three Italian regions

Responsibilities between the state and regions in the decentralized Italian health system

The Italian National Health Service (NHS) was established at the end of the 1970s based on a decentralized organizational system including the central government, regions and municipalities (Costa Font & Turati, 2018). The process of decentralization was further implemented during the 1990s and

Table 1. Policy capacities.

Level Dimension	INDIVIDUAL LEVEL	ORGANIZATIONAL LEVEL	SYSTEM LEVEL
ANALYTICAL CAPACITY	<ul style="list-style-type: none"> • Skills and experience in policy analysis • Skills and experience in policy evaluation; • Knowledge and expertise in the use of analytical tools 	<ul style="list-style-type: none"> • Availability (accessibility) to policy professionals with adequate analytical capacity • Practices and organizational machinery data collection and analysis • Organizational cultural embracing evidence-based policy-making 	<ul style="list-style-type: none"> • The extent and quality of system-wide data collection and data sharing • Accessibility of data or information to non – government organizations and private sectors • Availability and competition of policy advisory services • Institutional requirements and standards for policy analysis and evaluation
OPERATIONAL CAPACITY	<ul style="list-style-type: none"> • Inter-personal skills such as leadership, teamwork, and coordination • Skills and expertise in human resource management • Skills and expertise in budget and financial management • Skills and expertise in project management • Strategic management and planning 	<ul style="list-style-type: none"> • Level of coordination of the internal process • Performance management system; • System of autonomy and control within organization 	<ul style="list-style-type: none"> • Inter-governmental and inter-agency coordination; • Effectiveness of policy network and policy community • Clarity in the roles and responsibilities of different organizations in policy process
POLITICAL CAPACITY	<ul style="list-style-type: none"> • Knowledge about policy process • Policy acumen • Skills in communication, negotiation and consensus building 	<ul style="list-style-type: none"> • Political legitimacy in policy process; • Access to key decision-makers • Effectiveness in stakeholder engagement 	<ul style="list-style-type: none"> • Extent of Political accountability for policies • Levels of public trust in government. The level of participation of non-state actors in policy process • The presence of policy entrepreneur(s)

Source: Inspired by Wu, Howlett, and Ramesh (2018).

after the 2001 constitutional reform, when a significant transfer of responsibilities (administrative, fiscal and politico-legislative) from the national to regional governments progressively occurred (Toth, 2014). The Italian

health system is considered one of the most decentralized in Europe, along with the systems of Austria and Spain (European Committee of the Regions, 2017), and it is quite similar, in health policy, to a federal state (OECD, 2019). Thus, all the sub-national units (19 regions and 2 autonomous provinces) enjoy significant autonomy in designing the organization and the delivery of their healthcare systems (Palermo & Valdesalici, 2019; Terlizzi, 2019). This organizational and policy autonomy has led to a significant variety in the design of regional healthcare systems (Nutti et al., 2016) that is completely beyond the control of the state. Additionally, before the pandemic, it was well known that this regional differentiation in terms of health-care organization ‘fueled regional disparities in terms of quality and access to services due to differences in operative capacities’ (Terlizzi, 2019, p. 112). The coordination role of the state is to guarantee a homogeneous delivery of essential levels of care to all citizens throughout the entire national territory and to control the efficiency of expenditures through centralized processes (Mauro et al., 2017). That is, the state plays a kind of gatekeeping role (Doetter & Goetz, 2011), meaning that it is not well suited to coordinate the response to a pandemic.

In the months of the first response, the health response was in the hands of the regions, while the state contributed from outside through a number of provisions such as (i) allocating additional funding, (ii) taking measures facilitating the hiring of personnel, (iii) providing funds and logistical support for expanding hospitals, and (iv) playing an intermediary role in purchasing health equipment and facilities.

Overall, the challenge of the COVID-19 pandemic collided with decentralized regionalism at a critical moment in its historical development and under a high institutional differentiation of healthcare services, while the institutional design of the national system did not facilitate the possibility of strong centralized coordination.

Healthcare organization in Emilia-Romagna, Lombardy and Veneto

The three scrutinized regions exhibit high variance in their health system arrangement. On a continuum, Veneto has the greatest degree of regional coordination and Lombardy the least. Emilia-Romagna lies somewhere in the middle (Casula et al., 2020).

The Emilia-Romagna health system serves 4.5 million people and involves more than 60 thousand operators (2018). The overall governance is structured as a coalescence of levels including 8 health (public) enterprises, 4 academic hospital enterprises and 4 scientific institutes for medical research. At the top, the system is steered by the Regional Department of Health. This fragmented arrangement has undergone integration. The 8 enterprises (created through a significant merger of the largest set of pre-existing

enterprises) are gathered into three broad territorial large areas (TLAs) deputed to integrate and coordinate healthcare delivery. TLAs are not autonomous institutions or new enterprises but functional second-level entities. They are designed as economy of scale units for the efficient allocation of tasks and budgets. As such, the regional health system shows a potential for integrating centralization and decentralization at the same time.

The Lombardy health system serves more than 10 million people with more than 110 thousand operators. The current arrangement of the health system is a result of a pivotal reform that occurred in 2015 that replaced the former multilevel system composed of 15 local health (public) enterprises (ASLs) coordinating health services in the 10 provinces of the region, 27 autonomous hospital enterprises (AOs) and 16 scientific institutes for medical research (IRCSSs) with a new system that favoured autonomy and local coordination and allowed the patient to choose among different competitive suppliers. The current system has two levels. At the top, the Department of Welfare of the Lombardy Region coordinates 8 health protection (public) enterprises (ASTs), which steer 27 territorial health and social enterprises (ASSTs). The department and the ASTs have a planning and control

function, while the ASSTs are deputed to award service to a number of private and health units (predominantly hospitals and nursing homes). This means that every unit is relatively independent in delivering care and health services. Briefly, the chain of health services is concentrated in each unit, which separately provides treatment for patients who seek it. In practice, this arrangement has produced a pattern of health services grounded in hospitals that attract human and financial resources and recruit patients in emergency units. This phenomenon has engendered an overall hospital-centric system that requires coordination and monitoring from upper levels, but the coordination of the system is very complex due to the independence of its constitutive units and the competitive dynamics among them.

The Veneto health system serves 4.7 million people and has 57 thousand operators (2017). Since 2012, the regional health system has been harshly rationalized: 9 (public) enterprises replaced the fragmented system of 21 territorial units. This amalgamation favoured integration among the provinces and promoted the idea of health districts as a pilot experiment for second-level coordination among municipalities and provinces. Overall governance is supported by the Zero Authority (*Azienda Zero*), a cross-cutting agency entirely dedicated to planning, coordination, control and support of the

nine mentioned enterprises. The Zero Authority is directly steered by the Department of Health of the regional government. Office and hospital health services are also involved in permanent inter-administrative groups concerning (i) medical primary treatment provided by primary care physicians; (ii) intermediate treatment provided by hospitals, day hospitals, clinics and physical therapies; and (iii) special multi-tasking teams of

physicians focused on emergencies and prevention. The whole system is grounded in specialized roles: planning and control are assigned to the regional autonomous authority, the 9 local enterprises are exclusively involved in managing and delivering quality primary care (diffused across the territory and interrelated by networks), and hospitals are entirely involved in second-level treatment.

Overall, Lombardy's health system is based on nearly autonomous units that compete with each other for patients. The centrality of hospitals in delivery is the main feature, while the vertical coordination is very loose. Veneto's health system is characterized by an appropriate density of community care structures and by strong vertical coordination. Emilia-Romagna's health system is more functional, with strong vertical coordination of multilevel governance and adequate community-based services. Although very different, the Veneto and Emilia-Romagna systems are more coordinated and integrated than Lombardy's system. These organizational differences are the premises of the response to the pandemic.

Central guidelines and local dynamics in crisis management

Italy (like most other countries) was completely unprepared to deal with the COVID-19 outbreak: the national pandemic plan had not been updated since 2006; health organizations had not stockpiled any kind of PPE; and the horizontal and vertical coordination procedures had never been tested.

The Italian government's reaction has been characterized as a slow process through which the full lockdown was eventually reached (on 22 March). It has also been characterized as providing very ambiguous guidelines with respect to three relevant tools for combatting pandemics:

- the national protocol approved in January 2020 provided that only symptomatic cases with a demonstrable relationship with China should be tested;
- for weeks (until the beginning of April), the government (following the advice of its experts) suggested that only people with symptoms needed to be swabbed for testing;
- for weeks, the national government was ambiguous regarding the utility and use of masks, and thus, their regulation was left to the autonomous decision of regions.

The first two guidelines are the most important because they were the basis for the passive reaction to the first impact of COVID-19: the health response was to wait for the emergence of infections and to eventually lock down those zones in which the diffusion appeared to be high (until the national lockdown). Furthermore, the national government centralized

the purchase of all the health equipment needed to cope with the pandemic, from masks to ventilators. However, the ability to buy these goods was very low throughout March due to the international situation (Capano, 2020).

In this context, the analysed regions responded to the explosion of the pandemic in accordance with how their healthcare delivery was organized and managed and according to their political organizational capacity to act.

The analytical and operational capacities: the healthcare first response

The healthcare reaction has differed strongly across the three regions. In fact, Lombardy sought to hospitalize the infected, Emilia-Romagna pursued a mixed strategy by using both hospital and territorial care, and Veneto immediately adopted testing. Here, some clarifications are needed. Table 2 summarizes them.

As we can see, the first response in the three regions differed drastically. In Lombardy, the reaction to the dramatic diffusion of the virus was largely passive. Half of the patients were hospitalized. At a certain point, the hospitals could not accept more infected patients: they were almost overwhelmed. In some parts of the region, especially in the province of Bergamo, acute patients were left at home, without real care, and most of them died.² Indeed, in Lombardy, some hospitals were hotspots for the initial diffusion

of the virus. The lack of a territorial medicine network immediately flooded hospitals with hundreds of infected patients. No strategy for defending hospitals was implemented; the shortage of PPE caused a high percentage of infections even among health workers. The region followed the national guidelines in testing only those patients with symptoms. It is important to observe that the regional government showed hesitation on very important issues, for example, regarding the possibility of declaring two towns in the province of Bergamo a red zone (under strict lockdown) at the beginning of March. Furthermore, an important decision was made on 8 March, when the regional government asked the local health units to transfer the mildly

infected to care homes (thus spreading the infection to the elderly people there). The region suffered a shortage of PPE, which was also due to the slowness of the central government in purchasing it, but it did not react by seeking a local solution as other regions (like Veneto and Emilia-Romagna) did.

In Emilia-Romagna, the first impact of the outbreak especially affected the province at the border with Lombardy (from which it began to diffuse across the region from west to the east), where the situation was serious. However, the response was based on a good territorial medicine network and on clear central coordination by the regional government, which also immediately acted to purchase the necessary health equipment, by capitalizing on the

Table 2. Types of first responses in Lombardy, Emilia-Romagna, and Veneto from 20 February to 31 March 2020.

	General trend of the response	Type of test strategy	Use of hospitals	Home care
Lombardy	Hospital-centric reaction: the hospitalization rate was 49% of all cases	Only those with symptoms and usually the hospitalized infected	Despite an increase of ICU beds by 40%, saturation was reached, and patients were transferred to other regions or countries	First activation of units for home care
Emilia-Romagna	Reaction as a mix of hospitalization/territorial medicine; the hospitalization rate was 36% of all cases	Only those with symptoms and usually the hospitalized infected	Low hospitalized/assigned to the ICU ratio	First activation of units for home care
Veneto	Reaction based on territorial medicine; the hospitalizations rate was 21% of all cases	Massive use of swabs; active search for those infected among asymptomatic persons and health workers	Those hospitalized are largely those who needed intensive care	First activation of units for home care

Source: ALTEMS (2020).

dense international networks of the companies and firms based in the regional territory (Venturi, 2020). Initially, Emilia-Romagna also applied the national guidance to restrict swabbing to symptomatic patients; however, starting on 17 March, the region decided to increase testing notwithstanding the lack of swabs and reagents (thus showing its capacity to analyse the emerging data and to change its way of operating). The regional government, despite some difficulties, rolled out effective monitoring, intervention and coordination. For example, on March 16, the regional government decided to declare a town near Bologna a red zone to safeguard the regional capital from the virus.

In Veneto, the first response was prompt, different and independent from what was occurring in the rest of country. First, when the first two cases were diagnosed in a hospital in Monselice, the response was immediate and drastic: the hospital was closed for several days, and all the people inside were tested; two small areas were declared red zones. The response was then based on the principles of territorial management, hospital safety and massive testing if possible (Lavezzo et al., 2020). Notably, this testing strategy was possible because of two organizational and contingent drivers: (i) regarding the organizational driver, the region relied on an emergency plan for pandemics adopted in 2009 that envisaged a two-level Public Health Emergency Committee (strategic and operational), now supervised by a control room steered by the health department of the region and supported by the Zero

Authority. (ii) Regarding the contingent driver, the region enjoyed the individual decision made in January by Dr. Crisanti, a professor of microbiology at the University of Padua, who had reagents at his disposal (produced in-house), who suggested buying specific equipment needed to treat swabs faster, and who was the promoter of the double testing experiment in the municipality of Vò that made it possible to discover that half of all carriers

were asymptomatic, even though both the guidelines of the WHO and the Italian Ministry of Health provided indications to focus only on those who were symptomatic (Lavezzo et al., 2020). This discovery was pivotal in guiding the subsequent actions of Veneto.

Furthermore, an integrated IT platform was implemented that was capable of collecting and processing all the work, school and family contacts of the positive cases for contact tracing, which facilitated the generation of maps of COVID-19 diffusion. This integrated system was very helpful for the real-time monitoring of the diffusion of the virus in the region and thus also for containing its spread in specific target areas. Overall, Veneto achieved an organizational capacity that allowed autonomy in decision making and independence from what was happening in the other two regions, which, together with a contingent event (the individual role played by the professor of microbiology), made possible a rapid response for providing the appropriate treatment of patients, for protecting hospitals and for testing and tracing (Pisano et al., 2020).

Political capacity: arenas, stakeholders and legitimacy in responding to the pandemic

In Emilia-Romagna, the arena was distinctly institutional: the stakeholders were politicians, staff managers and health managers, while experts and professionals played a complementary role. Academic hospitals and opinion makers supported the politico-administrative coalition in a decisive role by consulting and by creating regional hubs for emergency management.

The institutional arena included two task forces: a technical and a political one. The technical task force was appointed on 3 February 2020. The task force was promoted by the general manager of the Welfare, Social Care and Health Department and comprised 9 members from the same department, the ASL enterprises and the University Hospital of Bologna. The aim of the task force was to support decision making as an advisory board: experts and professionals were called upon to provide knowledge and technical information for planning the emergency response. The political task force involved 5 members: Governor Bonaccini, two regional councillors and two general managers of the health departments for the northern and the southern areas of the region. In the second stage, in March, Governor Bonaccini appointed a Special Commissioner, a medical doctor formerly

regional councillor for health, to coordinate the region's COVID-19 policy until the end of July. The Special Commissioner played a pivotal role as a broker between the technical and political task forces, and he was the leader of the coalition. As a result, the legitimacy of the governor, Mr. Bonaccini, at the end of the first phase of the COVID-19 outbreak in June 2020 was stable: citizen's trust in the governor was 60%, ranking third out of the 15 ordinary-status regions of Italy (Demopolis, 2020).

In Lombardy, two coalitions were up in opposition to each other (supporters and opponents of the regional strategy). In addition to this conflict, the COVID-19 policy arena was crowded with stakeholders, and the coalition in favour of the regional government was very fragmented, redundant and loosely coupled. This coalition was led by the governor of Lombardy, Mr. Fontana, and the councillor for welfare, Mr. Gallera, who was the real master-mind of the strategy. They appointed three different crisis committees: (i) a COVID-19 committee, (ii) a task force (including representatives of the regional staff and the health systems) and (iii) a scientific advisory board. The first and the second were both appointed on March 12 (20 days after the crisis began). Both involved almost 150 people, including administrative staff of the region, a selection of representatives from the Milan AST, some ASSTs in the regional territory and one IRCSS, and many people from two private health service firms owned by the region and several foundations. Both committees were ultimately indirectly released by the region. The advisory board included 26 prestigious representatives of the different medical milieus in Lombardy. This scientific cluster was well assorted according to a criterion ensuring the representation of different hospitals and 'medical traditions'.

In addition to the coalition in favour of the governmental strategy, a coalition of opponents was also formed. The most relevant opponents were political: the mayors of Bergamo and Milan (both from the opposition parties) were against the strategy of the regional government, sometimes supported by the national government, and fought Governor Fontana intensely. Additionally, other eminent associations of physicians and health managers, journalists, and professionals from the medical world, including some hospital managers, repeatedly opposed the region's strategy, calling for more coordination and promptness in making decisions.

The dynamics described above significantly weakened the legitimacy of the regional government: at the beginning of June 2020, trust in Governor Fontana went down to 39%, ranking 13th nationally out of 15 ordinary-status regions (Demopolis, 2020).

In Veneto, the arena was simpler and more grounded on expert knowledge as a crucial resource. At the beginning of March, a task force was formed by the regional government. The purpose was to support the decision making of the governor by providing scientific and technical expertise. It was directly coordinated by the general manager of the Zero Enterprise and included 10 prestigious mem-

bers from the universities of Padua and Verona and from ULSS enterprises in the region. The influence of the board on governmental decision making was intense, and it developed a strong reputation among the public and politicians.

A secondary but pivotal role was also played by the general manager of the preventive care and public health department of the Veneto region, who intensely supported coordination and policy capacity in the implementation of the regional strategy. Under these leaders, a homogeneous and collaborative coalition comprising ULSS enterprises and territorial offices supported the regional government. Groups of interest,

public opinion and prestigious opinion leaders also upheld the decision making.

This performance strengthened the legitimacy of the regional government. The trust in Governor Zaia increased from 60% in December 2019– 75% in June 2020. In fact, at the end of the first phase of the pandemic, Mr. Zaia was the most popular governor nationwide (Demopolis, 2020).

Discussion

The first reaction of the Italian regions to the pandemic was divergent and can be summarized as follows.

Veneto performed much better than the other two regions in coordinating the health system before and during the crisis and in developing and implementing tools for intervention.

Lombardy's response was the opposite and even detrimental. The highly fragmented system characterized by weak vertical coordination and the 'one tool' approach (hospitalization) led to a high number of deaths and slow responsiveness.

Emilia-Romagna's performance occupied a place in the middle, as the region was slower to react at the beginning but then improved its performance. Its multilevel and coalescent arrangement initially reduced the region's capacity, which was regained owing to the leadership's coordination and the prompt reactions of experts.

In Veneto and Emilia-Romagna, the regional response proved capable of showing not only commitment but also control over the situation and was able to involve all of the most relevant stakeholders in the decision process, whereas in Lombardy, the dynamics were the opposite. In fact, Lombardy's response exhibited a very ineffectual style and did not prove capable of coordinating the complex and crowded advisory system appointed for the occasion. Furthermore, the regional leadership in Lombardy was opposed by various associations of doctors because of its strategy.

The empirical evidence regarding both decentralized arrangements and policy capacity emerging from this intra-country comparison is quite interesting from both the analytical and theoretical perspectives.

Regarding decentralization, the analysis revealed how, in the case of a pandemic, the more unprepared the centre of the system (such as the Italian government) is, the more the health response will depend on local implementation. Furthermore, it is very interesting to observe how the high level of decentralization in health policy has created the conditions

based on which the 'local' organizational capacities were drivers of not only different first health responses but also significant degrees of difference in the implementation of the national guidelines.

Veneto did not follow the national guidelines regarding testing. In fact, the national guidelines suggested testing only symptomatic patients, while in Veneto, owing to a 'local' experiment, an opposite strategy was pursued. This confirms that, as suggested by the recent literature on decentralization in crisis management (Moynihan, 2009, Stark & Taylor, 2014, Boin et al., 2018), such as during a pandemic, local networks and capacities can make the difference in terms of performance when strategic decisions must be made.

Analogously, the high level of decentralization favoured local solutions but impeded generalization. The Veneto strategy based on testing did not immediately become a template for all other regions and remained detached. The central government did not adopt this effective strategy and only slowly decided to shift its attitude towards testing. As Capano (2020) noted, this was probably due to the awareness of the shortage of reagents and thus to the fact that changes to the national guidelines could not have been followed

by other regions. However, the clash between experts on the Veneto advisory board and the national Scientific Technical Committee level reinforced disconnection and separateness.

Regarding the policy capacities, the analysis revealed the undeniable importance of the high organizational autonomy that regions have been given in terms of the design and management of healthcare. This is one of the paradoxes of the first healthcare response to the pandemic: the national first health response completely depended on local policy capacities regarding healthcare and are irrelevant without specific preparation to deal in a coordinated way with pandemic disease.

Therefore, without any previous monitoring or established procedure through which the central government can ensure a minimal effective response (a real, tested, coordinated national pandemic plan), the national guidelines are a 'plot in search of authors'. In the Italian case, the authors were the regional governments. Their policy capacity depended on the regional policy legacy and thus on how they had organized their health systems and on their skill in learning from contingency.

Organizational capacity was important for an effective first health response that could be delivered only via previously adopted arrangements. In times of crisis, sudden change is not feasible. Thus, if healthcare is organized as a coordinated and integrated system with well-distributed and organized primary care (as in Veneto and, to a degree, in Emilia-Romagna), it is more capable of dealing with a pandemic than a fragmented and competitive healthcare design centred on hospitals, such as that in Lombardy.

At the level of analytical organizational capacity, Veneto has performed very well in gathering the proper information, in having the best professionals with adequate analytical capacity, in adopting an evidence-based perspective and in immediately demonstrating awareness that hospitals should be protected. In this dimension, Emilia-Romagna exhibited some initial weakness but has improved over time, as shown, for example, by the decision to increase testing and to enforce local lockdowns on the basis of the emerging evidence. Lombardy performed very poorly in this dimension, and this may seem incredible considering the stock of medical and scientific knowledge at the disposal of the region, which has seven universities (some of the best research centres in the country).

The operational organizational capacity clearly points to the superiority of the design of the healthcare system in Veneto: the overall regional system seems to have reacted in a very coordinated way in responding to the pandemic. The Veneto system has been shown to be very compact and integrated in its processes. The operational capacity of Emilia-Romagna has performed well, especially in terms of coordination, though a few problems emerged in the first response due to the concentration of the contagion in one specific province. The operative capacity of Lombardy has been low for a long time, particularly lacking in systemic coordination and managerial performance and without any evident learning capacity.

Finally, Veneto and Emilia-Romagna have shown high political organizational capacity: they have both proved able to maintain high legitimacy in the policy process and have been very effective in involving the regional community and other stakeholders, as in the case of the involvement of private firms to find PPE. In contrast, Lombardy's actions have been characterized by persistent internal political opposition and by a clear difficulty in engaging in other stakeholders in a proper way.

What can be learned from the Italian experience?

This paper has shown how the response to a crisis such as a pandemic can produce significant intra-country differences in mitigation response. The Italian response to COVID-19 is a case in point, as indicated by the manifest differences among the three richest and most severely affected regions in their first health-oriented reactions to COVID-19. The institutional features of Italy's healthcare decentralization have had a substantial role in preparing a very differentiated first health response to the pandemic: they empowered local contingent solutions where

functioning and exacerbated poor performance and detrimental choices. Without effective national preparation and coordination, the strengths and weakness of local organizational capacities are exaggerated: decentralization matters both in a negative (as in Lombardy) and positive way (as in Veneto and in Emilia-Romagna). Thus, what emerges from the intra-country comparison presented here is that health policy organizational capacities definitively matter when responding to a pandemic and that the greater the extent to which a national system is decentralized, the greater the probability of very differentiated first responses, as also shown by the Swedish case, i.e., a partially decentralized system that has had a variegated implementation of its initial nudge-based policy of containment (Pierre, 2020).

Thus, this empirical evidence points to the urgency of improving the arrangements by which healthcare is designed by reflecting on how vertical coordination and decentralization can be combined in health policy (both at the national and local levels) based on the issue at stake, because organizing day-to-day healthcare delivery is very different from quickly responding to the explosion of a pandemic.

Furthermore, if the organizational capacities of healthcare delivery matter and, during a pandemic, some organizational designs are better than others, as shown by the three analysed cases, then it is necessary to redesign the rules and processes through which health policy is ultimately decentralized by ensuring that the local organization fits what is needed to deal with the extraordinary events and challenges represented by a pandemic.

Notes

1. Riccardo et al. (2020) show that some slight differences notwithstanding, the reproduction number (R_0) in the three analysed regions was the highest throughout the country: for Lombardy, it was 2.96; for Emilia-Romagna, it was 2.84; and for Veneto, it was 2.54.
2. The data are still problematic here, but various estimations, including by the National Institute of Statistics, hold that the number of deaths in the province of Bergamo could in reality be double the official count of deaths due to COVID19 (ISTAT, 2020).

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Notes on contributors

Gilberto Capano is Professor of Political Science and Public Policy at the University of Bologna.

Andrea Lippi is Professor of Political Science and Public Policy at the University of Florence.

ORCID

Gilberto Capano <http://orcid.org/0000-0003-3533-7407>

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