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COVID-19 PANDEMIC



EXPERIENCE OF ITALY

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Preface

Since the start of the COVID-19 outbreak, the world has had to deal with the crisis. A number of countries and their respective governments have tackled the pandemic differently to each other. The objective of this series of analyses is to present and discuss the actions undertaken in various countries, with each case discussed individually. We hope our presentation of all the literature and materials reviewed will certainly facilitate easy and ready reference, allowing for future contributors to add to the research. We have tried to rigorously verify the authenticity and completeness of the information presented in literature and materials cited in this study but, we apologize to our readers for any inconvenience that may result from any error in the publications.

Effort has been made to present all the information in a chronological manner with the exception of reordering information to fit the narrative of the study as intended. We sincerely hope that much more additional material could come to light enabling us to substantially improve on this study.

We express our earnest gratitude and acknowledgement to all who translated and published works cited in this study in different forms earlier. Finally, we hope our effort will be well rewarded by the warm and enthusiastic response of our esteemed readers and wish that our study extends an invitation to more academic contributions on COVID-19 in the future.

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Study on 'COVID-19 Pandemic: Experience of Italy'

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Abstract

Italy was arguably most gravely affected by the COVID-19 pandemic despite having one of world's best healthcare systems. In this study, we reviewed secondary literature, reports, and other reading materials to assess why the outcome of COVID-19 pandemic was so disastrous in Italy and how the government responded in effect. We outline the timeline of events as they unfolded in the country after the initial outbreak in China. We analyzed different literature to point out the contributing factors that worsened the situation in Italy that resulted in deaths in thousands. The study discusses government policies and financial packages worth 750 billion euros introduced to help businesses cope with the economic fallout from the COVID-19 pandemic and how international and national organizations extended help to fight off the situation. We also look at the health system of Italy to understand the factors that may have contributed to high mortality rate and the lessons that can be drawn from them by other countries. Italy, home to one of the oldest population in all of Europe, found itself in a very difficult position to tackle a disease that primarily takes the form of a serious case in people who are typically older with preexisting medical conditions. Apart from that, the study reveals that a combination of factors such as relaxed immigration regulations for workers in certain industries, densely populated cities, culture and habits, and government's lack of seriousness in the initial days may also explain the high death toll in Italy and why the situation might have spiraled out of control.

Introduction

Coronavirus disease 2019, known as COVID-19, is a highly transmittable disease that causes symptoms in people such as aches and pains, nasal congestion, runny nose, sore throat or diarrhea. People who are generally older and those with underlying medical condition are much more gravely affected by the disease that can. The disease was first identified in early December 2019 in Wuhan, the capital of China's Hubei province, and has since spread globally due to the influx of people between countries that fueled the ongoing 2019–20 coronavirus pandemic. Later on 30th January, 2020, the World Health Organization (WHO) declared the outbreak as a Public Health Emergency of International Concern, followed by recognizing it as a pandemic on 11th March, 2020 as more countries poured in reports of infected cases. Italy reported its first official case on 20th February 2020, while later studies suggest that cases of coronavirus may have appeared as early as a month prior to the first reported case. Since then as of 26th April, 2020, Italy has reported 195,351 total confirmed cases and a total 26,384 deaths. In this paper, we try to find out why Italy's COVID-19 outbreak was so catastrophic in comparison to other nations despite having one of the best

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public healthcare systems in the Western world housing plenty of trained healthcare providers. By systematically reviewing literature, we try to analyze how the coronavirus began to spread through the prosperous and well-educated region of Italy although doctors and medical professional were well-trained and adequately prepared. We explore the contributing factors of why Italy failed to curb the spread of the disease at a large scale and outline the immediate measures taken by the government of Italy to prevent the spread of the virus all over the country and the laws and decrees issued to preserve law and order in the nation. We also discuss the financial support packages provided by Médecins Sans Frontières (MSF) as medical assistance for people affected by COVID-19 and further initiatives taken by different stakeholders to contribute to economic recovery.

Italy has an estimated population of 60.48 million as of 2020,³ making it the fourth-most populous country in the European Union. The country is quite densely populated with an average density of 533 people per square mile.⁴ As of 2019, Nominal Gross Domestic Product (GDP) of Italy was \$2 trillion and the GDP growth per annum was 0.3%⁵, ranking third as the country with the largest national economy in the European Union. Italians have the sixth-longest life expectancy at birth, average age of Italian females and males being 86 years and 81.9 years respectively, with a total average age of 84 years for both sexes combined.⁶ Nearly one in four Italian residents is aged over 65 years making Italy home to the oldest population in Europe⁷ and people belonging to older age-range are the most likely group to develop serious cases as a result of COVID-19 which may even be fatal. Italians are not as familiar with the concept of social distancing as people from other countries, like China or South Korea, which is evident from the fact that almost 23,000 people in Italy were fined for breaking coronavirus social distancing rules⁸. As Italians started panicking which turned to riots turning the situation worse, government of Italy decreed that social distancing must be strictly observed. Mass gatherings were cancelled in order to maintain social distancing in many regions. Despite all the challenges and hurdles, Government of Italy issued and enforced orders overnight to protect their citizens. In addition, decisions were taken to recruit fresh medical graduates as helping hands for nursing homes and retired doctors in Italy were called back to treat coronavirus patients⁹ so that the burden on healthcare providers in the intensive care units could be reduced.

³ Italy Population, Worldometer. Cited from <https://www.worldometers.info/world-population/italy-population/>

⁴ Italy Demographics, Worldometer. Cited from <https://www.worldometers.info/demographics/italy-demographics/>

⁵ Italy GDP Annual Growth Rate, Trading Economics. Cited from <https://tradingeconomics.com/italy/gdp-growth-annual>

⁶ Italy Demographics, Worldometer. Cited from <https://www.worldometers.info/demographics/italy-demographics/>

⁷ Rachael Rettner (11 March 2020), Why are deaths from coronavirus so high in Italy, Live Science.

⁸ Kate Feldman (13 April 2020), Almost 23,000 fined in Italy for breaking coronavirus social distancing rules, NY Daily News.

⁹ Chico Harlan and Stefano Pitrelli (29 March 2020), Retired doctors in Italy are heading back into the fray to treat coronavirus patients, The Washington Post

Research Questions

- How is Italy's healthcare system set up and how are the healthcare provisions provided?
- What was Italy's first response to COVID-19 outbreak?
- What policies were issued by the Government of Italy as a response to COVID-19?
- Why was Italy's COVID-19 outbreak so catastrophic? What resulted in so many deaths from COVID-19?
- How did Italy's demography contribute to more dangerous outcomes as a result of COVID-19?
- What challenges did the Italian healthcare system experience and continue to experience due to COVID-19?
- How did the Government of Italy developed and allocated its financial support packages for economic recovery from COVID-19 crisis?
- How did China and MSF helped Italy fight its battle against COVID-19?

Methodology

The study systematically reviewed secondary literature, reports, official government policies and other materials to develop a comprehensive narrative for analysis. We relied on the database of World Health Organization, World Development Indicator, Eurostat, and Worldometer for the authenticity of demographic information of the country. This study cross-checked documents from several sources to analyze the situation of COVID-19 in Italy. The website of Italy's Ministry of Health provided us understanding of the country's healthcare system as well as the healthcare provisions provided by the government of Italy. Reviewing several local and international sources helped to outline the measures taken by the government to handle the situation and control the people and involvement of other organizations in tackling the pandemic. Information drawn from various sources were used as a guiding framework of the study and helped us outline events that unfolded in Italy from the outset of COVID outbreak in the country in a chronological manner.

Findings

Healthcare System in Italy

Servizio Sanitario Nazionale (SSN), National Health Service in English, is a healthcare system that encompasses the complex functions of healthcare delivery and welfare services, managed and provided by the Italian state. Services are provided free of charge at the point of delivery, complying with universal healthcare coverage. While the national level ensures that the general objectives and fundamental principles of the national health care system are met, regional governments in Italy are responsible for ensuring the delivery of benefits package to the larger population. The National Health Service (SSN) is a system of structure

and services that guarantees all citizens, irrespective of caste and creed, universal access to the equitable provision of health services, in compliance of article 32 of the Italian Constitution. The Essential Levels of Assistance (LEA) are services that the SSN is required to provide to all citizens, free of charge or upon payment of a participation fee (ticket), with the public resources collected through the general taxation (taxes). Each citizen is registered with the National Health Service and is included in the list of assisted persons of his/her own local health authority, known as Azienda Sanitaria Locale (ASL), and this ASL is completely accountable for the protection of their health and must unreservedly provide patients, within its jurisdiction, the opportunity to avail healthcare and other services provided entailed in LEA. Previously on 18th March, 2017, government of Italy had outlined new LEAs in an effort to fortify the country's healthcare system through the Decree of the President of the Council of Ministers. One of the major levels identified at the Prime Ministerial Decree was a collective prevention and public health program which included all prevention activities aimed at communities and individuals in particular such as surveillance, prevention and control of infectious and parasitic diseases, including vaccination programs; protection of the health and safety of open and confined spaces; surveillance, prevention and protection of health and safety in the workplace; animal health and veterinary urban hygiene; food safety - protection of consumer health; surveillance and prevention of chronic diseases, including the promotion of healthy lifestyles and organized screening programs; and nutritional surveillance and prevention.

Timeline of COVID-19 in Italy

- On 31st January 2020, the Italian government suspended all flights to and from China and declared a state of emergency. In February, eleven municipalities in northern Italy were identified as the centers of the two main Italian clusters and placed under quarantine. The majority of positive cases in other regions traced back to these two clusters.¹⁰
- Italy identified its first case of local coronavirus transmission on 20th February 2020. Different reports claim that two Chinese tourists in Rome were the first positive cases reported in January 31st and that coronavirus cases may have actually appeared as early as a month before patients were officially diagnosed with COVID-19 positive.¹¹
- The virus soon spread around 10 towns at which point the government of Italy became on full alert¹².

¹⁰ la Repubblica (22 February 2020), Coronavirus in Italia: aggiornamento ora per ora.

¹¹ Chris Smith (25 April 2020), Everything we know about Italy's horrific coronavirus outbreak might've just changed, BGR.

¹² Allison McCann, Nadja Popovich and Jin Wu (5 April 2020), Italy's Virus Shutdown Came Too Late. What Happens Now? The New York Times.

- A cluster of cases started appearing, initially with 16 confirmed cases in Lombardy on 21 February,¹³ and 60 additional cases followed. The first death was on 22 February.¹⁴ By the beginning of March, the virus had spread throughout all regions of Italy.
- On 6 March 2020, the Italian College of Anesthesia, Analgesia, Resuscitation and Intensive Care (SIAARTI) published medical ethics recommendations regarding triage protocols that might be employed.¹⁵
- On 8 March 2020, Prime Minister Giuseppe Conte expanded the quarantine to all of Lombardy and 14 other northern provinces, and on the following day to all of Italy, placing more than 60 million people in quarantine.¹⁶
- On 11 March 2020, the Prime Minister prohibited nearly all commercial activities except for supermarkets and pharmacies.¹⁷
- On 19 March 2020, Italy became the country with the highest number of confirmed deaths in the world. By 31 March, Italy had conducted about 507,000 tests for the virus.¹⁸
- On 21 March 2020, the Italian government closed all non-essential businesses and industries, with additional restrictions to movement of people.¹⁹
- On 31st March 2020, Italy emerged as one of the world's epicenters of active coronavirus cases with 77,635 active cases. The total of confirmed cases was 105,792, with 12,428 deaths, and 15,729 recoveries. Due to the finite number of tests performed, the real number of infected people in Italy, as in other countries, was estimated to be higher than the official count.
- As of 26th April 2020, Italy reported 195,351 total confirmed cases, of which there were a total 26,384 deaths from COVID-19²⁰ and the number of confirmed cases was the third-highest in the world behind that of the United States and Spain.²¹

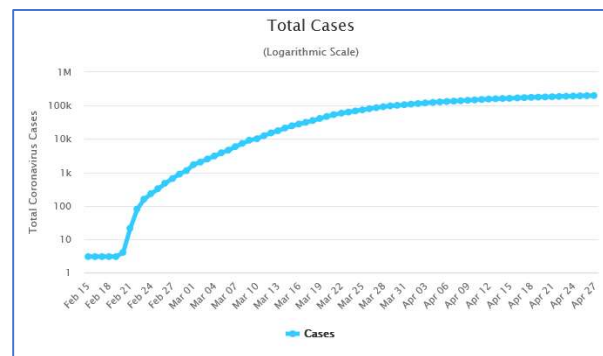


Figure 1: Total Coronavirus Cases in South Korea
[Source: Worldometer]

¹³ Elisa Anzolin and Angelo Amante (21 February 2020), Coronavirus outbreak grows in northern Italy, 16 cases reported in one day, Thomson Reuters Foundation.

¹⁴ Corriere della Sera (22 February 2020), Coronavirus: first cases in Milan. What do we know about the new infections in Lombardy, Veneto and Piedmont

¹⁵ Privitera, Greta (11 March 2020), Italian doctors on coronavirus frontline face tough calls on whom to save, Politico.

¹⁶ BBC News (9 March 2020), All of Italy to be placed on coronavirus lockdown.

¹⁷ Eric Sylvers and Giovanni Legorano (11 March 2020), Italy Hardens Nationwide Quarantine, The Wall Street Journal.

¹⁸ Johns Hopkins University Center for Systems Science and Engineering (JHU CCSE), Coronavirus COVID-19 Global Cases.

¹⁹ Safi, Michael; Giuffrida, Angela; Farrer, Martin (22 March 2020), Coronavirus: Italy bans any movement inside country as toll nears 5,500, The Guardian.

²⁰ Coronavirus disease 2019 (COVID-19) Situation Report – 97 (26 April 2020), World Health Organization.

²¹ Aljazeera (23 April 2020), Italian COVID-19 cases fall as Rome grapples with easing lockdown.

Measures taken by the Government of Italy against COVID-19

On 22nd February, the government announced a new decree imposing the quarantine of more than 50,000 people from 11 different municipalities in Northern Italy. Further measures were also imposed, including restrictions on travel except for essential work or health reasons, closure of all cultural centers, and cancellation of sports events and public gatherings. The government closed all bars, restaurants, and stores except food markets and pharmacies across the country. People who disobeyed travel restrictions without a valid reason could be fined up to 206 euros and face a three-month prison term. All schools and universities were closed throughout the country. People were permitted to go out to shop for essential items, exercise, and work if they were unable to work from home. Furthermore, exceptions were made if there were health reasons or they had to go somewhere to take care for a sick relative. The quarantine zones were labelled Red Zones, the areas in Lombardy and Veneto outside of them were called the Yellow Zones and safety and prevention measures were advertised in public places and special sanitizations were performed on public transport in the rest of the national territory. As of April 15, Lombardy had 113.1 deaths per 100 thousand population, more than six times higher than in the rest of Italy, and accounted for 37% of cases and 53% of deaths of the country. Factors attributable to high cases of mortality in Lombardy are high pressure on hospital services which might have negatively affected the hospitals' preparedness and hospital services might not have been sufficiently supported and integrated with community and primary care services.²²

Italy tested 1.053 million people from a population of around 60 million.²³ The Italian military and law enforcement agencies were instructed to secure and implement the lockdown. Actions such as strengthening of the Higher Institute of Health, strengthening of territorial assistance networks establishment of temporary health areas, assistance to people and pupils with disabilities, provisions to ensure the use of medical devices for oxygen therapy and simplification measures for the purchase of medical devices were implemented.²⁴ In addition, a WHO-led team of experts from WHO and the European Centre for Disease Prevention and Control (ECDC) went to Italy on 24th February 2020 to support Italian authorities in understanding the situation. WHO experts provided support in the areas of clinical management, infection prevention and control, surveillance and risk communication. At this stage the focus is on limiting further human-to-human transmission.

According to the Decree of the President of the Council of Ministers to take effect from 8th March 2020, government of Italy address their previous preventive measures under the title "Urgent measures on containment and management of the epidemiological emergency from COVID-19" to introduce preventive measures of containment and control of COVID-19.

²² Anna Odone, Davide Delmonte, Thea Scognamiglio, Carlo Signorelli (24 April, 2020), COVID-19 deaths in Lombardy, Italy: data in context, The Lancet Public Health

²³ Aljazeera (23 April 2020), Italian COVID-19 cases fall as Rome grapples with easing lockdown.

²⁴ Covid-19, Government launches plan to strengthen the NHS, National Health Service, Ministry of Health, Italy, 2020

According to Article 1 from the Prime Ministerial decree, in measures to contain the virus in several provinces like Modena, Parma, Reggio and others, any movement of natural persons entering and leaving the territories were to be avoided. Persons with symptoms of respiratory infection and fever were strongly recommended to stay at home, limit social contacts as much as possible, and contact their doctor. A complete ban on the movement from their home or residence of persons subject to quarantine or found to be positive for the virus was issued. All public activities were entirely suspended, with the exception of places of worship that were brought under the subject of organizational measures such as to avoid large gathering of people.

According to Article 2 from the Prime Ministerial decree, in measures to counter and contain the spread of the COVID-19 virus throughout the country, government suspended all congresses, meetings, meetings and social events were medical personnel in charge of carrying out healthcare service were involved. Activities of pubs, dance schools, game rooms, betting and bingo halls, discos, events, shows and performances of any kind, including cinema and theatre performances, etc. were all suspended.²⁵ As situation in Italy spiraled out of control and number of coronavirus patients soared into hospitals, China stepped in to assist Italy in their fight against COVID-19 by sending in doctors who brought first-hand experience of dealing with the coronavirus with them, having had previous experience in treating coronavirus patients. They also supplied Italy with medical supplies around mid-March, 2020. China helped Italy reduce its strain on its healthcare facilities due to an influx of coronavirus patients by flying in doctors and providing medical equipment. Since the crisis in Italy was still far from being over, on 10th April 2020, the government initially extended the lockdown until May 3, 2020.²⁶ Now, Italy is preparing to lift a nationwide lockdown from May 4th, 2020²⁷ where the country has allowed its factories and building sites to reopen²⁸ and stores and museums would be allowed to reopen from May 18 and restaurants, cafes and hair salons would be allowed to reopen on June 1 under the instructions of the Prime Minister of Italy.²⁹

Teams from Médecins Sans Frontières (MSF) in Italy are providing support to Italian health authorities in response to the COVID-19 coronavirus pandemic. MSF staff are based in four hospitals in the northern Italian province of Lodi, part of the Lombardy region, and the epicenter of the outbreak in the country. The MSF team in Lodi province is composed of Italian infectious disease specialists, anesthetists, nurses and logisticians, who bring their global experience in managing epidemics from the countries where MSF works to support Italian hospitals. They are working in collaboration with local health authorities and

²⁵ DECREE OF THE PRESIDENT OF THE COUNCIL OF MINISTERS (8 March 2020) (OJ No. 59 of 8-3-2020). Cited from https://www.esteri.it/mae/resource/doc/2020/03/decreto_del_presidente_del_consiglio_dei_ministri_8_marzo_2020_en_rev_1.pdf

²⁶ La Repubblica. (10 April 2020). Coronavirus, Prime Minister Conte: "Closing until May 3, we cannot give up now"

²⁷ Aljazeera (23 April 2020), Italian COVID-19 cases fall as Rome grapples with easing lockdown.

²⁸ Stephen Jewkes and Angelo Amante (26 April 2020), Italy to reopen factories in staged end to coronavirus lockdown, Financial Post

²⁹ Scott Neuman (26 April 2020), Italy's Prime Minister Announces Gradual Easing Of COVID-19 Lockdown, OPB.

personnel of hospitals in the cities of Lodi, Codogno, Casalpusterlengo, and Sant'Angelo Lodigiano, on a number of activities, including disease prevention and care for patients.³⁰ Italy made a smart move which certainly helped to provide additional staffing to fill gaps and meet needs in the setting of the ongoing crisis. The country planned to tap 10,000 aspiring medical graduates to help provide additional staffing in general practitioners' clinics and in the homes of elderly people. This, the government believes, will allow more senior physicians to provide care in hospitals that are overwhelmed and near capacity.³¹

COVID-19 challenges for Italian Healthcare System

The Lombardy region of Italy that has experienced the heaviest burden of the COVID-19 pandemic in the country. At its standard operational level, Lombardy has a capacity of 724 intensive care beds. To tackle the medical equipment shortage, Italian Civil Protection undertook a fast-track public procurement to secure 3800 respiratory ventilators, an additional 30 million protective masks, and 67 000 severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) tests. To avert the shortage of health workers produced by decades of inadequate recruitment practices, the government authorized regions to recruit 20 000 health workers, allocating €660 million for the purpose.³² With an overwhelming number of patients needing intensive care, Italy experienced a chronic shortage of healthcare workers. The long recovery time from pneumonia caused by the coronavirus is also contributing to overcrowding in intensive care units. On 9 March the government announced a plan to add 20 000 new doctors, nurses, and hospital employees to meet demand. Retired doctors were called on, as well as students who had completed their medical degree and are in the final year of specialist training, to alleviate some strain from the healthcare facilities.³³

With 70% of ICU beds reserved for critically ill Covid-19 patients, those beds are being allocated only to those “with a reasonable chance to survive,” as physicians make wrenching triage choices to try to keep alive those who have a chance. Many major hospitals in Italy were becoming sources of coronavirus infection, with Covid-19 patients indirectly transmitting infections to non-Covid-19 patients.³⁴ Italian doctors, being at the frontline treating infected patients round the clock, were more exposed to Coronavirus in hospitals. As of 6 April, 2020, around 8,000 doctors and nurses have been infected and over 60 have died.³⁵ More than 10,000 health care workers in the northern provinces have been infected

³⁰ MSF. (March 2020), MSF starts COVID-19 response activities in four northern Italian hospitals

³¹ Angelo Amante and Crispian Balmer (17 March 2020), Italy rushes new doctors into service as coronavirus deaths rise above 2,500, National Post.

³² Benedetta Armocida, Beatrice Formenti, Silvia Ussai, Francesca Palestra, Eduardo Missoni (25 March, 2020), The Italian health system and the COVID-19 challenge. DOI: [https://doi.org/10.1016/S2468-2667\(20\)30074-8](https://doi.org/10.1016/S2468-2667(20)30074-8)

³³ Paterlini Marta (16 March 2020), On the front lines of coronavirus: the Italian response to covid-19 BMJ 2020; 368: m1065

³⁴ Sharon Begley (21 March 2020), A plea from doctors in Italy: To avoid Covid-19 disaster, treat more patients at home, Stat News.

³⁵ Douglas Broom (6 April 2020), In pictures: Inside an Italian hospital's COVID-19 unit, World Economic Forum.

with the virus according some reports.³⁶ Doctors' unions have expressed considering legal action over the deaths of more than 140 medical personnel due to a lack of personal protective equipment (PPE).³⁷ The sudden influx of new patients depleted medical supplies and caused shortages of vital medical equipment, such as ventilators for people with severe respiratory difficulties. China later agreed to supply much needed medical equipment, including contracts for 10,000 pulmonary ventilators, 2 million face masks and 20,000 protective suits.³⁸

Other factors that worsened Italy's Coronavirus outbreak

There are several factors that contributed to the disastrous outcome of COVID-19 pandemic in Italy. Italy has the oldest population in all of Europe and nearly one-fourth is over the age of 65. Since coronavirus poses relatively more threat to elderly people who are likely to have pre-existing medical conditions, more people from Italy developed serious cases from COVID infection. In Italy, 85.6% of those who have died were over 70 further illustrating that those whose immune systems have declined with age, appear to be more vulnerable to becoming severely ill after contracting the virus.³⁹ This resulted in a sudden spike in demands for intensive-care units in hospitals and thus overwhelming the capacity of Italy's healthcare system. Italy is also very densely populated: Rome has 5,800 people per square mile, and Milan packs more than 19,000 people into every square mile.⁴⁰ Hence making people more susceptible to catching COVID-19 from local transmission

The high number of coronavirus infection cases in Italy may be explained by the expanding air travel with China. Italy, among all other European nations, has the highest number of air connections with China after the air connections between the two countries tripled earlier this year. Italy signed a memorandum of understanding (MoU) with China in early January 2020 to expand the air links between the two countries in order to expand tourism. The weekly passenger flights to China were announced to be increased by 108, and by a further 56 through 2021 and 2022. Further adding to the point, Milan, the country's financial capital, has close trade and educational connections with China. The whole region is home to office for many multinational corporations where people travelled to and from China quite frequently, which could also explain the rapid spread of disease.⁴¹ Visitors from Wuhan who had visited Northern Italy in January and February may have allowed for asymptomatic transmission of the virus since fever is not visible in all COVID-19 cases.⁴²

³⁶ Barbie Latza Nadeau and Valentina Di Donato (6 April 2020), As northern Italy is ravaged by coronavirus, there's trouble brewing down south, CNN.

³⁷ Aljazeera (23 April 2020), Italian COVID-19 cases fall as Rome grapples with easing lockdown.

³⁸ Johnny Wood (16 March 2020), China is sending medical experts and supplies to help Italy fight coronavirus, World Economic Forum.

³⁹ Virginia Pietromarchi (24 March 2020), Why is Italy's coronavirus fatality rate so high? Aljazeera.

⁴⁰ Italy Population, Worldometer. Cited from <https://www.worldometers.info/world-population/italy-population/>

⁴¹ Jason Horowitz (24 February 2020), Coronavirus Stalls Milan, Italy's Economic Engine, The New York Times.

⁴² Rudan I. (2020). A cascade of causes that led to the COVID-19 tragedy in Italy and in other European Union countries. Journal of global health, 10(1), 010335. <https://doi.org/10.7189/jogh-10-010335>

The Italian government imposed strong measures in the northern regions but were not able to enforce in the rest of the country much earlier. Decentralization and fragmentation of health services seem to have restricted timely interventions and effectiveness.⁴³ The country was punished for its premature relaxation around the real danger of COVID-19. The Italian Government failed to make quick and steadfast decisions as can be seen with Governments in China and South Korea. Italy seems to have suffered from two data-related problems. In the early onset of the pandemic, the problem was data paucity. More specifically, it has been suggested that the widespread and unnoticed diffusion of the virus in the early months of 2020 may have been facilitated by the lack of epidemiological capabilities and the inability to systematically record anomalous infection peaks in some hospitals. More recently, the problem appears to be one of data precision. In particular, in spite of the remarkable effort that the government has shown in regularly updating statistics relative to the pandemic on a publicly available website, some commentators have advanced the hypothesis that the striking discrepancy in mortality rates between Italy and other countries and within Italian regions may (at least in part) be driven by different testing approaches. These discrepancies complicate the management of the pandemic in significant ways, because in absence of truly comparable data (within and across countries) it is harder to allocate resources and understand what's working where (for example, what's inhibiting the effective tracing of the population).⁴⁴

Economic stimulus package to tackle the financial difficulties

Government of Italy introduced policies like suspending the need to pay bills, taxes and mortgages to ease pressure on firms and households. On 10th March, 2020, the Italian government approved a USD 25 billion plan designed to cushion businesses from the economic fallout of the COVID-19 pandemic. Initially, the cabinet approved a package worth approximately 12 billion euros (roughly USD 13 billion). The rest were to be kept as a reserve to pay for further measures. The government also asked parliament to increase the country's deficit targets by 20 billion euros (USD 21.7 billion). In addition, they asked the European Union to allow Rome to raise its deficit spending beyond the 7.5 billion euros (USD 8.1 billion) planned to help businesses hurt by a sharp drop in tourism over the past month which was later increased to 10 billion euros (USD 10.8 billion). The other provisions included help for workers facing temporary layoffs, boosting a guarantee fund for loans to small- and medium-sized companies, compensation for firms whose turnover has plunged more than 25% and some form of temporary ban for business and personal mortgage repayments.⁴⁵ Later on 6th April 2020, Italy adopted a new package of economic measures including the strengthening of anti-takeover rules, and public guarantees for 400 billion euro

⁴³ Benedetta Armocida, Beatrice Formenti, Silvia Ussai, Francesca Palestra, Eduardo Missoni (25 March, 2020), The Italian health system and the COVID-19 challenge. DOI: [https://doi.org/10.1016/S2468-2667\(20\)30074-8](https://doi.org/10.1016/S2468-2667(20)30074-8)

⁴⁴ Gary P. Pisano, Raffaella Sadun and Michele Zanini (27 March 2020), Lessons from Italy's Response to Coronavirus, Harvard Business Review.

⁴⁵ The Irish Times (March 10, 2020), Coronavirus: Italy suspends mortgages and household bills

(USD 433 billion)-worth of loans and investments to help business whether they are small, medium or big with immediate liquidity⁴⁶. This brings the total amount of government aid to €750 billion (USD 812 billion).⁴⁷

Rome approved to guarantee up to 90% of loans to businesses for 200 billion euro (USD 216.7 billion) via the public owned export credit agency Servizi Assicurativi del Commercio Estero (SACE) and an additional 200 billion euro (USD 216.7 billion) have been earmarked to guarantee investments to support exports. Apart from government initiatives, citizens have also stood up to help each other in this distressing times. Almost every grocery store in Italy now has a cart at the front where people who can still afford groceries are encouraged to donate items for those who cannot. In apartment blocks across the country, there are continuous reports of care packages deposited in front of the doors of people who have lost their jobs by neighbors and police officers. The municipality now lists places where people who need basic supplies and food can go for help and several companies prepare care packages in lieu of giving cash handouts to ensure people are buying food.⁴⁸

Conclusion

Countries are yet to understand how the COVID-19 health crisis started, Italy included. In a matter of weeks, from February 21 to March 22, Italy went from the discovery of the first official Covid-19 case to a government decree that essentially prohibited all movements of people within the whole territory, and the closure of all non-essential business activities. The initial state-of-emergency declarations were met by skepticism by both the public and many in policy circles — even though several scientists had been warning of the potential for a catastrophe for weeks. Because the Italian health care system is highly decentralized, different regions tried different policy responses rendering it ineffective. Despite the measures taken by the government, the spatial distribution of the epidemic expanded rapidly throughout the country. One of the reasons was the huge proportion of population aged more than 65 years old and the large population density. The number of ICU beds were not sufficient to accommodate all the patients came for treatment every day. The Italian government has progressively worked to contain the disease, including declaring a total national lockdown on March 10. More than two weeks later, the country is finally beginning to see a decline in the number of new cases. Italy has struggled and is continuing to fight against an unprecedented crisis that found dangerously fertile ground in elements of the country's demographics, business, geography and culture. After experiencing one of the worst economic blows in the history of the country, the Prime Minister has announced that

⁴⁶ Giorgio Leali (6 April 2020), Italy adopts €400B liquidity plan amid coronavirus crisis, Politico

⁴⁷ Euro News (7 April 2020), Italy ups coronavirus stimulus spending to €750 billion - nearly half its GDP

⁴⁸ Barbie Latza Nadeau and Valentina Di Donato (6 April 2020), As northern Italy is ravaged by coronavirus, there's trouble brewing down south, CNN.

the country will start easing lockdown restrictions on May 4 to avoid irreversible damage to the economy.⁴⁹

Abbreviation

ASL - Azienda Sanitaria Locale (Local Health Unit)

COVID-19 - Coronavirus disease 2019

ECDC - European Centre for Disease Prevention and Control

GDP – Gross Domestic Product

LEA – Essential Levels of Assistance

MSF - Médecins Sans Frontières

SACE - Servizi Assicurativi del Commercio Estero

SARS-CoV-2 - Severe Acute Respiratory Syndrome Coronavirus 2

SIAARTI - Italian College of Anesthesia, Analgesia, Resuscitation and Intensive Care

SSN – Servizio Sanitario Nazionale (National Health Service)

WHO – World Health Organization

Author's contributions

DevResonance Ltd conceived of the study and designed the theory for conducting the study. The study was coordinated during the development of the draft of the study. DevResonance Ltd and the employees of DevResonance Ltd revised and approved the final version of the manuscript.

Competing Interest

DevResonance Ltd. has no significant competing financial, professional or personal interests that might have influenced the performance or presentation of the work described in this manuscript.

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