

Resilient companies in the time of Covid-19 pandemic: a case study approach

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Abstract

Purpose – The Covid-19 pandemic represents an extraordinary and unpredictable event influencing the whole economy and society. Using a case study approach, the authors explored how big companies operating in Italy were able to respond to the crisis to ensure business continuity. Therefore, the authors discussed different business disruptions caused by Covid-19; in addition, they developed an integrated policy framework in which they proposed specific strategic responses for increasing the level of organizational resilience. The aim of the paper is to discuss and reflect on the ability of specific companies to increase their level of organizational resilience when unexpected events happen.

Design/methodology/approach – The authors conducted semi-structured interviews with target CEOs of four major companies operating in Italy in different industries. Especially, the authors focused on multiutilities, media and communications, investment banking and mobile telecommunications. The interviews were based on questions dealing with Covid-19 implications and strategic responses to navigate this complex scenario.

Findings – Based on the CEOs' contributions, the authors presented short-term actions and long-term strategies planned and implemented by each Italian company. In particular, the authors emphasized similarities and dissimilarities in terms of strategic responses and future business development.

Originality/value – The analysis of practical cases was helpful for increasing their knowledge on organizational resilience and for providing the managerial community with a policy framework to navigate unexpected events like the Covid-19 pandemic.

Keywords Covid-19, Organisational resilience, Digital, Technology, Strategy

Paper type Research paper

1. Introduction

The in-progress Covid-19 pandemic is generating enormous threats that will change the whole society and economy forever. At the time of this article, more than 159 million confirmed cases and 3.3 millions of deaths are recorded around the world (World Health Organization, 2021). If we look at the *economic side* of the effects, it is estimated that the virus could totally cost the global economy between US\$8.1 and US\$15.8 trillion globally (Schwab, 2020). At the same time, the International Monetary Fund expects that the global economy could grow up to 5.5% in 2021, with an expansion of 4.2% in 2022. The worst scenario related to the job market forecasts serious disruptive effects in terms of global unemployment; in fact, it is expected to increase by 24.7 million (International Labor Organization, 2020). Only in China – where the first virus case happened in November 2019 – car sales plummeted 80% and passenger traffic dropped 85% from normal levels (Bloomberg, 2020); in addition, the



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number of departures from Chinese ports has decreased by 20%, according to [Haren and Simchi-Levi \(2020\)](#). Thus, the Covid-19 emergency affects every industry: tourism could lose at least US\$1.2 trillion ([UNCTAD, 2020](#)) and the number of scheduled flights worldwide reduced by around 50% in August 2020 compared to August 2019 ([Statista, 2020](#)). Furthermore, the industrial production index dropped by 37.5 last February, and it is considered “the lowest reading since 2004” by UNCTAD. In Europe, after a decrease in March and April, industrial production is increased by 9.1 % in June 2020 ([Eurostat, 2020](#)). In relation to the transaction market, the CBOE volatility index [1] touched over 80 points on March 2020 ([Baek et al., 2020](#)); normally, its value travels around 20 points. Moreover, the virus is making the diversification strategy ineffective; also, the merger and acquisition (M&A) market is affected by the deterioration of capital markets and the real economy, resulting in several pulled or delayed deals. Even the consequences involving the globalization theories are widely discussed; the pandemic is already pushing the countries into nationalist narratives. For instance, the USA could consider China a real threat, while the Chinese could interpret the American measures and feelings as racial. For decades, markets have become open, the supply chains global, middle classes have been reversed and new connections have been created. More recently, flows of information, ideas, money, jobs and people are challenged. In addition, there is a tightening of immigration rules, supply chains get shorter, and new barriers to trade and investment emerge.

If we look at the *social side* of the virus effects, vulnerable individuals, people living in poverty conditions, older persons and people with disabilities are hit, as recently suggested by the [United Nations \(2020\)](#). With regards to Africa, over 4 million confirmed cases are recording up ([Africa Union, 2021](#)); especially, the pandemic represents a serious threat in places like South Sudan where any place in intensive care treatment is present. Furthermore, people living in crowded slums between dirt and violence are particularly at risk. More in general, we need to consider that in some countries there are no sufficient numbers of hospital beds. Last but not least, the psychological impact deriving from the application of national measures (e.g. quarantine) is considerable; in addition to psychological stress ([Scott et al., 2020](#)), depressive symptoms, fear and insomnia ([Torales et al., 2020](#)), the association between alcohol, drug abuse and suicide and unemployment is significant ([Continetti, 2020](#)).

As discussed, the Covid-19 is increasing the fragility of the whole system and it is also changing the way in which companies and institutions create, share and capture value. The aim of this paper is to consider – using a case study approach – potential impacts caused by the virus and to identify possible strategic responses for increasing the organizational resilience. We, therefore, seek to address the following research questions in this study: *How do organizations respond in terms of strategies to the Covid-19 pandemic in order to increase their resilience?*

The structure of the paper is as follows. First, we discuss potential solutions and benefits of new technologies, and we present organizational resilience as a theoretical framework. We then outline the four interviews conducted with the CEOs and we next summarize the main findings. Next, we address how firms can change their strategies to increase the level of organizational resilience in response to the Covid-19 pandemic. Finally, we develop an integrated policy framework aiming at guiding the managerial community in the time of unexpected events.

2. Theoretical framework

2.1 The disruptive effects of Covid-19 pandemic on entrepreneurship

As discussed in the previous section, the major economic and social consequences deriving from the advent of Covid-19 pandemic quite vary across industries and geographical areas. Since the beginning of the pandemic, more than 70% of start-ups terminated contracts of full-

time employees (Fintech, 2020). At the same time, many companies had to establish new partnerships and to convert their expertise, resources and equipment to navigate this new complex scenario in which entrepreneurship is the key (e.g., Giorgio Armani, Gucci). Despite the virus forced almost every country to increase business closing and human distances, there is a growing necessity to be closer and united – at least symbolically (Jani, 2020). In fact, the collaboration enables companies, individuals and institutions to achieve a collective purpose. Coordinating practical efforts is helpful to find effective measures in response to the pandemic. Bacq and Lumpkin (2021) referred to the *social entrepreneurship* concept to offer theoretical insights on how decisions in time of crises should be cross-sector, either social or non-social. Therefore, the new entrepreneurship model requires a deeper and greater understanding on how social problems need to be addressed. In the face of disasters like Covid-19, the entrepreneurial action deals with psychological conditions, remote connections and resilience (Shepherd, 2020). In any cases, (Maritz *et al.*, 2020) argued that the strategic measures adopted should be proactive to accurately leverage on opportunities. Entrepreneurs can generally refer to cultural aspects to share common values and systems but they can even rely on lifestyle to maintain “a certain way of living” in case of unexpected events (Ratten, 2020, p. 512).

In the following paragraphs, we present the idea of organizational resilience as an ability to overcome environmental changes.

2.2 The role of organizational resilience in time of unexpected events

Organizational resilience is considered a crucial issue in the field of strategic management (Vogus and Sutcliffe, 2007). It is represented by the ability to deal with difficulties and environmental turbulence (Buliga *et al.*, 2016; Holling, 1973; Linnenluecke, 2017; Vogus and Sutcliffe, 2007). In case rapid changes occur, resilience is associated with negative outcomes when the organization is rigid in terms of structure and control mechanisms (Buliga *et al.*, 2016). In order to increase the level of resilience, companies can explore the role of organizational ambidexterity and strategic consistency (Iborra *et al.*, 2019). Some other authors (e.g. Sullivan-Taylor and Branicki, 2011) identified the need to be “more strategic and proactive.” The ability to respond to unexpected events also depends on the size of the companies (Iborra *et al.*, 2019; Linnenluecke, 2017); for instance, large firms tend to be focused on being prepared for disruptions (Linnenluecke, 2017; Weick and Sutcliffe, 2015), while others implement organizational routines to reduce complexity and uncertainty and be aligned with the external environment (Boisot and Child, 1999; Lengnick-Hall and Beck, 2005). (Lengnick-Hall and Beck, 2005) found that the way in which companies execute specific creative problem-solving routines really influences their likelihood to be more resilient. Other possible responses to increase resilience include boosting certain employee strengths and the development of determining employee abilities, such as confidence and hope (Luthans, 2002).

2.3 Investments in new technologies: opportunities for growth

In times of crisis like the Covid-19, the investments in digital technologies characterize a fruitful solution to mitigate the disruptive effects, thus increasing the level of organizational resilience. Despite the difficulty in measuring the value of the digital economy, its size ranges from 4.5% to 15.5% of the global GDP, according to UNCTAD (2019). At the individual level, more than 4.5 billion people around the world are represented by Internet users, and almost 4 billion persons are social media users (We Are Social, 2020). At the firm-level, many organizations have already started to direct their strategic investments to the development of digital infrastructures and ICT tools. Moreover, several benefits are associated with the adoption of new technologies like artificial intelligence (AI), blockchain, 5G, drones and the Internet of Things (IoT). For instance, if we refer to AI, we can imagine a wide set of

applications, ranging from healthcare and public and social sectors to education, and we expect that their implementation can improve the disaster response due to better and faster management of resources. Especially, the collaboration between multiple partners can enhance the synergies linked to the creation of algorithms, and thus avoiding any kinds of useless efforts. Moreover, a McKinsey Global Institute analysis estimates that AI is able to advance the value in many sectors like travel, transport and logistics, and retail, together with automotive, high-tech and oil and gas. In general, the ability of machines is to understand and to run an activity very quickly and in a more efficient way. The dark side of new technologies' application is that the automation could increase fears and uncertainty; for instance, according to McKinsey and Company, 49% of global work activities are expected to be replaced by machines by 2055. Furthermore, at the global scale, the economic impact of 5G-enabled connectivity will exceed 12 trillion dollars in the next 15 years (Weinberg, 2020). Also, researchers from the Imperial College London estimated that the higher the levels of connectivity, the higher the economy's growth rates; in particular, on average, a 10% increase in the adoption of mobile broadband causes an increase up to 2.8 % of economic growth implications of modern technology in the COVID-19 epidemic (Edquist *et al.*, 2017).

2.4 Adoption of new technologies by industry

We found that extant literature mainly investigated the role of various applications of new technologies in healthcare for combating the Covid-19 pandemic (Frank *et al.*, 2019; Ishack and Lipner, 2020; Kumar *et al.*, 2020a). For instance, Frank *et al.* (2019) and Kumar *et al.* (2020) presented the most relevant benefits associated with digital solution in terms of medical prevention, treatment and follow-up, while Kumar *et al.* (2020b) identified how these technologies can help retailers in providing efficient services in the same sector. Also, Ishack and Lipner (2020) found that the application of 3D printing technology reported advantages for the supply of respirator masks in the same industry. Despite wide research is focused on the medical industry, we adopted the Standard Industrial Classification (SIC codes) to identify how the investments in advanced technologies can be interpreted as a strategy for growing and overcoming the Covid-19 crisis in every sector (Table 1). Furthermore, while (Nicola *et al.*, 2020) summarized the socio-economic effects of the virus in primary, secondary and tertiary sectors, the digital aspect is anything but predominant. In this sense, we start from the assumption that companies operating in different industries can grasp relevant opportunities in the event that unexpected events like the Covid-19 take place. The virus pandemic represents a generalizable context of analysis. Thus, we believe that additional industries like agriculture, manufacturing and public administration can offer interesting insights to explore the role of digital solutions in response to unexpected events.

Even though several authors explored potential responses to the Covid-19 pandemic, yet we found that there is space for emphasizing the role of new technologies in overcoming the crises.

3. Research methodology

With the aim to identify and discuss the most challenging transformations as well as potential successful strategic responses to the Covid-19 pandemic, we analyzed four cases. Despite (Yin, 2014) argued that a single case offers depth of information, we decided to provide additional insights by collecting data from four interviews with the CEOs of companies operating in different industries in Italy (Table 2). The selection of four case studies is helpful to explore and understand how different organizations operating in different sectors react to the Covid-19 pandemic in order to safeguard their resilience. Especially, our sample consisted in multiutilities, media, utilities and telecommunications

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Industry	Potential digital solutions	Potential benefits	Author(s)
Agriculture, forestry and fishing	(1) Digital data platform	(1) Improvement of resources efficiency	Di Vaio <i>et al.</i> (2020), Gregorio and Ancog (2020)
	(2) Mobile apps for farmers	(2) Reduction of manual work	
	(3) Robotics	(3) Information sharing	
	(4) Precision agriculture	(4) Development of rural areas	
	(5) Services in rural areas	(5) Equipment innovation	
	(6) Sustainable ecosystems	(1) Integration and automation across value chain	
	(7) Data-driven agriculture	(2) Productivity improvement	
	(8) Artificial intelligence	(3) Better performance	
Mining	(1) Real-time analytics and data visualization	(4) Digitally enabled workforce	Li and Zhan (2018)
	(2) Cloud solutions	(5) Decrease in injuries	
	(3) Digital plants	(1) Higher productivity	
	(4) Virtual simulations and 3D printing	(2) Environmental impact	
	(5) Automation of the assets (e.g., Artificial intelligence)	(3) Reduction of emissions	
Construction	(1) Focus on hospitals, schools, roads and plants	(4) Safety	Sepasgozar and Davis (2019)
	(2) Management of waste production	(5) Cost reduction	
	(3) Ecological building	(6) Better collaboration	
	(4) Augmented reality		
	(5) Software to prevent accidents and to monitor delivery times		
Manufacturing	(1) Smart factory	(1) Higher customization	Wuest <i>et al.</i> (2020)
	(2) 3D printing	(2) Better collaboration	
	(3) Industrial robots and drones	(3) Low energy costs	
	(4) Smart grids	(4) Reduction of emissions and materials consumption	
	(5) Real-time analytics		
	(6) Sophisticated sensors		
Transportation, communications, electric, gas and sanitary services	(1) Car sharing	(1) Higher citizen protection	Sarkis <i>et al.</i> (2020), Chen <i>et al.</i> (2020)
	(2) Autonomous and connected vehicles	(2) Ecosystem integration	
	(3) Real-time traffic management	(3) Data sharing	
	(4) Robotics	(4) Reduction of gas emissions	
	(5) 3D printing	(5) Supply chain optimization	
	(6) Digital infrastructures	(6) Higher security	
Wholesale trade	(1) Sensors	(1) Inventory optimization	Levius <i>et al.</i> (2018)
	(2) Predictive analytics applications and big data analytics	(2) Data sharing	
	(3) Innovative tracking systems and real-time remote inventory sensing	(3) Higher efficiency	
	(4) Artificial intelligence	(4) Disintermediation	
	(5) E-commerce	(5) Support to decision-making	

(continued)

Table 1.
List of potential digital solutions developed and related benefits deriving from technology adoption, by industry

Industry	Potential digital solutions	Potential benefits	Author(s)
Retail trade	<ol style="list-style-type: none"> (1) E-commerce (2) Social media (3) Artificial intelligence (e.g., chatbots) (4) Augmented reality (5) Circular economy (6) Analytics (7) Digital-physical integration 	<ol style="list-style-type: none"> (1) Time saving (2) Higher client engagement (3) Focus on customer experience (4) Hyper- personalization (5) More informed customers 	Saveleva <i>et al.</i> (2020), Weber and Schütte (2019)
Finance, insurance and real estate	<ol style="list-style-type: none"> (1) Apps (2) Artificial intelligence and robo-advice platforms (3) Digital payments (e.g., cryptocurrencies) (4) Advanced analytics (5) Blockchain 	<ol style="list-style-type: none"> (1) Disintermediation (2) Higher accessibility (3) Speed transactions (4) Higher client engagement (5) Better individual profiling (6) Transparency 	Wang <i>et al.</i> (2020)
Services	<ol style="list-style-type: none"> (1) Robotics (2) Sharing economy (3) Artificial intelligence (4) Social media and messaging 	<ol style="list-style-type: none"> (1) Collaboration and engagement (2) Higher accessibility (3) Customization (4) Data sharing and availability (5) Innovative and fast solutions 	Choi (2020)
Public administration	<ol style="list-style-type: none"> (1) e-Government (2) Electronic invoices (3) Electronic transactions (4) Cloud platforms 	<ol style="list-style-type: none"> (1) Higher efficiency (2) High-quality public services (3) Transparency and accessibility (4) Better interaction between administrations, citizen and businesses 	Yang (2020)

Table 1. Source(s): Our elaboration

	Acea S.p.A.	Sky Italia S.r.l.	A2A S.p.A.	Vodafone Italia S.p.A.
Industry	Multiutility	Media	Utilities	Telecommunications
Revenues*	3.186 M €	3.29 B €	7.324 M €	43,7 M €
Employees*	7.576	3.037	11.294	6.536
Type of services offered	Water, energy infrastructure and environmental services	Production and distribution of pay-per-view digital channels, pay-per-view services and interactive TV services, via satellite and cable	Production and distribution of electricity; storage of components and electrical equipment; distribution of natural gas	Administrative activity and provision of telecommunications services

Table 2. Characteristics' overview of the four cases studied

Note(s): *2019 data

companies. The comparison of the pandemic effects across sectors as well as the variety in terms of subsequent strategies implemented provides interesting insights. Therefore, the organizations selected can be considered appropriate for the study since they compete in various and dynamic environments where the effects of Covid-19 and the related strategic responses are expected to be explored and confronted. Moreover, we believe that the Italian business represents a suitable context due to the significant impact of the virus recorded (e.g., lockdown measures and number of deaths). The Italian context can be generalizable, still contemplating the specific institutional frameworks. Also, the choice of these sectors is justified if we consider the disruptive and considerable consequences provided by the pandemic in terms of revenues, consumer behavior and safety. In this case, the need for organizations to react for increasing the organizational resilience is understandable and deserves an in-depth study. For instance, some analysts estimated that the Covid-19 pandemic could cause up to US\$5bn in losses to the global film industry [2] In relation to the telecommunication industry, 3 billion citizens all around the world are still not connected, and this condition appears even more critical due to the pandemic (International Finance Corporation, 2020) [3].

With regards to the data collection process, the semi-structured interviews served as the primary source of data and CEOs of these companies represented our target. In particular, the semi-structured framework enabled us to capture “all aspects of the practices undertaken” (Landry *et al.*, 2016, p. 431); they were conducted in the period March–June 2020 and were based on questions dealing with the Covid-19 implications. With the aim to explore the level of organizational resilience, each of the CEOs was asked to describe the most important impact of the crisis as well as the most relevant strategic responses planned or adopted. In the following section, we report and discuss the fundamental insights emerged during the data collection process.

4. Findings

4.1 Presentation of the Acea S.p.A. case: interview with manager 1

At the time of the interview, Manager 1 was the CEO of Acea S.p.A., an Italian multi-utility company, operating in the water, energy and environmental sectors.

Among the different types of responses to the Covid-19 pandemic, the informant emphasized the need to offer protection to every citizen. This finding clearly emerges from the following quote: “*The first objective of companies like Acea S.p.A. is to guarantee not only remote connections but also water services in consideration of the increasing health-related needs (e.g., hygiene).*” [Interview with Manager 1, April 3rd, 2020]. Therefore, a fast response in time of rapid transformations makes the difference, according to Manager 1. On the one side, the mitigation actions should be adopted for more negative aspects; on the other side, support and sponsorship actions should be assessed for more positive occasions. With regards to Acea S.p.A., an immediate transition to the agile work has been implemented with more than 80% employees managed remotely. Moreover, every individual has been equipped with the necessary tools (like face masks) to ensure that the safety of the entire workplace is guaranteed. At the same time, while the customer support has been maintained, less important activities has been postponed or discontinued. A specific Crisis Committee, in which the manager of compliance is included, has been chosen to assess and manage the risks and to plan potential response to future crises. More in general, “[. . .] it is essential to build a strong team in peacetime so that it goes well in wartime” [Interview with Manager 1, April 3rd, 2020]. The possibilities to encourage the installment payments, to postpone the user deadlines and to close physical branches in favor of the virtual ones are needed. Not less important is the role of education; in particular, Acea S.p.A. has recently established the Digital Academy to support the development of digital professional skills. The concept of

fragility is thus opposed to the capability of each organization to be resilient and flexible. Resilience means learn to prevent, to predict, and to plan. After the Covid-19 pandemic, we will become better; there will be evolving ways of working, higher productivity, waste reduction, and finally, better relationships. In the words of our informant: “*Smart-working will be adopted only by determined employees’ categories since the presence in the field is required for the most operative and indispensable workers who ensure that services are properly distributed*” [Interview with Manager 1, April 3rd, 2020].

4.2 Presentation of the Sky Italia S.r.l. case: interview with manager 2

At the time of the interview, Manager 2 was the CEO of Sky Italia S.r.l., a company providing television and radio broadcasting services and offering broadcasting paid-television, national and international contents of sports, entertainment, news, documentaries, travel, music, adult and children’s channels.

With regards to the effects deriving from the Covid-19 pandemic, companies are forced to be more innovative and even more focused on the simplification process enabled by the digital. In this context, the whole customer experience is redesigned (e.g., one-stop shopping) with the aim to guarantee the quality which always remains “the must.” For instance, Manager 2 believes that the premium positioning of Sky Italia S.r.l. needs to be protected and appropriately justified.

In relation to the strategic responses developed, the informant argued that, when disruptive events like the Covid-19 occur, the increasing presence of digital skills within the organization represents a potential driver for growth. Furthermore, the correct monitoring of customer behaviors, in addition to the accurate selection of institutional information – without being conditioned by speculative elements – are crucial elements for the reconfiguration of customer journey and touch points. Moreover, the quality of the contents as well as the innovation of the formats is increasingly important.

Nowadays, the number of hours dedicated to digital contents is exponential. Furthermore, the role of entertainment (e.g., shows, TV series) is more and more important, also considering the increasing competition. Therefore, the development of valuable and various contents delivered through a unique digital platform like Sky Italia S.r.l. makes the difference and finally simplify the customers’ life [Interview with Manager 2, April 8th, 2020].

After the Covid-19 pandemic, nothing will remain the same: we should be more aware of the transformations, more adaptive and also further collaborative to develop together the television of the future.

4.3 Presentation of the A2A S.p.A. case: interview with manager 3

At the time of the interview, Manager 3 was the President of A2A S.p.A., an Italian utility company, active in electricity, gas, district heating, waste, integrated water cycle and public lighting.

With regards to the Covid-19 pandemic’s consequences, the virus represents a threat for every industry and a potential opportunity for exploiting innovation (e.g. remote working). Among the most affected advanced technologies, there are digital productions and communications but also energy-related and transports-related applications (e.g., connectivity).

In response to the crisis, the figure of the CEO is crucial for navigating the complex scenario. According to our informant, “[. . .] *existing risk management activities did not include any crisis plan that is at least adequate for navigating the current pandemic. Therefore, there is the need to define a structured crisis management plan, by taking into account potential disruptive shocks*” [Interview with Manager 3, March 26th, 2020]. Of course, the collaboration

with key partners is relevant, as well; especially, the role of the Chief Financial Officer (CFO) as the person who manages numbers and evaluates their consistency with respect to the vision of the CEO is crucial. In addition, *“the role of government is crucial to encourage the infrastructure investments that are at the service of every citizen and organization”* [Interview with Manager 3, March 26th, 2020]. After the Covid-19 diffusion, we will need to have more and more “speed” numbers useful to synthesize business and strategic elements. Moreover, there will be growing phenomena of markets’ contraction due to the virus; for instance, companies suffering from the Covid-19 pandemic can decide to merge or acquire in order to reinforce their competitive positioning but also to take advantage from the economies of scale. In consideration of the increasing amount of non-performing loans (NPLs), there is the need to consider also financial aspects like the possible introduction of the Guarantee Fund to cover any NPLs generated by the SMEs. Supportive measures like these can avoid the risk that a health crisis could evolve into a financial one. To summarize, every organization should develop a “visionary leadership” in which short-term actions are reconciled with the most ambitious long-term goals.

4.4 Presentation of the Vodafone Italia S.p.A. case: interview with manager 4

At the time of the interview, Manager 4 was the CEO of Vodafone Italia S.p.A., a company providing telecommunication services and offers prepaid, postpaid, data, roaming, mobile, messaging, tariff plans, Internet, broadband and integrated wireless communication services.

Investing in telecommunication infrastructures represents the “must,” according to Manager 4. At the same time, due to the increased traffic data diffused both in the mobile and in the fixed networks, it is mandatory to invest in 5G technology. To do this, it is fundamental to simplify the regulatory framework at national scale in order to ensure flexibility and resilience. In relation to the 5G development, our informant clearly recommended and suggested that *“[...] the entire system as well as the bureaucratic procedures should be simplified to speed up the fifth-generation technology. In fact, 5G will become more and more critical in every sector such as life science”* [Interview with Manager 4, June 8th, 2020].

After the Covid-19 pandemic, our society will be characterized, on the one hand, by increasing distances, on the other hand by suppressed distances. In relation to this point, the existing global supply chains demonstrated to not be able to overcome the shocks – *“they are too vulnerable, indeed”* [Interview with Manager 4, June 8th, 2020]. Moreover, geographical and political risks frequently emerge. If we look at the customers’ side, the virus will lead to a growing “contactless” economy where the digital represents a useful tool for interactions and processes’ optimization. From now on, Vodafone Italia S.p.A. should become a “solution integrator” able to offer, in fact, multiple solutions in terms of seamless customer journey. In this sense, the role of partnerships (e.g., with Microsoft, recently announced) is crucial to innovate and to successfully implement a strategic transformation. Within the company, dedicated meetings are conducted with the aim to exchange opinions about the current situations and to predict future events. With regards to the government, our informant declared that *“[...] there is an even stronger relationship between states and economy. Therefore, every leader needs to manage this additional complexity”* [Interview with Manager 4, June 8th, 2020]. Finally, with the advent of the Covid-19 pandemic, an increased level of security is required and the real value of emotional connectivity developed with the colleagues is better understood.

In sum, our analysis highlighted five key areas of strategic intervention in response to the Covid-19 pandemic: financial support, new sanitary norms, new business models and new business systems, digital investments and support to education. Indeed, by dedicating resources to physical and digital infrastructures, by reconfiguring the existing ways in which companies do business and by increasing the overall safety and education of citizens’

organizations can also increase resilience and flexibility. The following [Figure 1](#) summarizes our data structure and the main strategic aggregate dimensions emerging from our analysis.

5. Discussion

Summarizing the main insights and contributions of the informants, we found that the role of digital technologies is decisive in developing effective responses to crises like the Covid-19 pandemic. In this sense, our starting assumption appeared to be well-proven. One crucial aspect emerged from the interviews is related to the ability to distinguish between short-term actions and long-term decisions to accurately capture potential opportunities from the crisis. Most of the informants focused on the development of digital skills useful to navigate the complex scenario. Again, a strong association between digital solutions investments and positive strategic responses to unexpected events is associated with the higher level of organizational resilience. Also, while the financial aspects are particularly felt by Manager 3 and Manager 4, Manager 1 mostly emphasized the human side related to the management of the crises. All of the interviewees agreed on the need to ensure quality and delivery of the offering and the informants also claimed that cooperating through partnerships or team working can help to compete in the present but also to make the difference in the future.

Starting from the data collected, we aim at setting out a potential structure of integrated policy framework to develop short-term and long-term measures, and thus to implement a generalizable recovery plan in response to the Covid-19 pandemic. Each informant was asked



Figure 1.
Data structure reproduced on the basis of the interviews

Source(s): Our elaboration

to describe the organization's most important strategic responses to the virus. The interviews revealed that the *financial support* represents one of the main priorities to protect the citizens and to strengthen the assets of both small and medium enterprises and big companies. To support the business, certain institutional policies are needed. For instance, [OECD \(2020\)](#) suggested to increase liquidity and to provide income support to households; in addition, governments could consider the deferment of tax and VAT payments and incentives in terms of digital investments. Second, the health crisis of Covid-19 called for *new sanitary norms* regulating the job places that should be even stricter and aligned with the international standards in terms of safety and protection. In this sense, every organization should aspire to be a "safe organization to work in and with" from now on. Third, *new business models and new business systems* should be configured to become resilient to possible unexpected events often surprising the organizations ([Linnenluecke, 2017](#)) and to offer sustainable and innovative products and services. Generating new procurement alternatives and implementing new ways of doing business (e.g., smart-working) can both represent valid answers to the crises. Strategies like re-shoring and supply chain shortening have been evaluated and executed since the Covid-19 has been spread. The interviews showed that *digital investments* represent a key strategy to navigate this complex scenario. Anyway, to realize the full potential of new technologies adoption, it is mandatory to encourage the general access to digital infrastructures, services and data. As suggested by [OECD \(2019\)](#), each person will possess three connected devices by 2022; nevertheless, still too many countries record a digital gap, and they need to work more on supporting the diffusion of digital tools. If we look at the job market, it is also crucial to develop distance learning and digital skills in order to navigate the risks associated with Covid-19. Finally, as systems massively move to e-learning, it is crucial to guarantee access equality as well as high skill levels. According to WEF, almost 15% of the global workforce will have to change jobs or, alternatively, to acquire new skills by 2030. Therefore, *support to education* of human capital must be accelerated and directed above all toward the adaptation and flexibility of individuals, and the development of technological skills, creativity, innovation, emotional intelligence and data management. Finally, based on our four cases, we are able to consider the role of potential institutional constraints in driving the change and in navigating the crises. Therefore, a constant dialogue between business and institutions should emerge even if frequently difficult to be assessed ([Herrera-Echeverri et al., 2014](#)).

6. Policy implications

The response to unexpected events like Covid-19 pandemic has to be global. The execution of the strategies discussed by our informants entails a strong cooperation between institutions, companies, universities and private actors. Therefore, the policies adopted can be either public, strategic and operational ([Weible et al., 2020](#)). Among several public policies, partial closures or stringent lockdowns can be planned. Mitigating strategic and operational measures can include crisis management, the inclusion of medical personnel or emergency managers, as well as the creation of dedicated committees and departments.

The most important lesson of the Covid-19 pandemic is that national governance arrangements are extremely diverse across the world. Moreover, a unique effective model does not exist since it strongly depends on local characteristics. Despite these differences, specific integrated and collective actions such as the accountability, the communication and transparency among partners and the technology adoption are crucial.

7. Conclusions and future research

The aim of the paper is to discuss and reflect on the ability of specific companies to increase their level of organizational resilience, when unexpected events happen. In offering an

integrated policy framework that summarized the most relevant strategic responses to be adopted, we follow Peng *et al.* (2009, p. 73) in affirming that the institution-based view offers “interesting insights” on how firm-level strategy-making processes and both rulers and economic outcomes can be connected. In this sense, we emphasize the need to consider potential institutional issues in developing a successful strategy of organizational resilience. Therefore, future studies can investigate whether the cooperation between business and institutional levels encourages the possibility to harness significant opportunities in case of unexpected events. In particular, the role of institutional proximity can be evaluated to understand whether organizations with similar institutional elements tend to respond similarly to the crises. For instance, does the formation of strategic alliances affect the likelihood that the organizational resilience is increased? In this case, comparative analyses based on different types of industries and institutional frameworks can provide promising insights.

A remarkable result collected from the interviews is the ability to respond to the Covid-19 pandemic with an accurate planning to assess and manage risks. In fact, an inadequate risk assessment regarding the urgency of the situation can lead to a rapid global spread of the virus (Peeri *et al.*, 2020). In order to accurately define a set of potential risks threatening the organizational resilience, the entire decision-making process needs to be redefined taking into consideration critical functions and services, important values and reallocation potentials. In particular, due to the advent of big data, the phase of “analysis” of decision-making has become intricate (Acciarini *et al.*, 2020). For this reason, among a wide set of data, each information need to be validated with the aim to select the most relevant evidence. Therefore, in the event that crises like the Covid-19 occur, how big data can play a positive role in increasing the level of organizational resilience?

To sum, we recommend that an incisive policy framework able to amplify the organizational resilience should consider: financial support, definition of new sanitary norms, development of new business models and new business systems, digital investments and support to education. Furthermore, building and powering a valuable network of stakeholders (e.g. public-private partnerships) is fundamental to shape an integrated policy approach. Therefore, this study increases our knowledge on organizational resilience theory and offers the managerial community a framework of potential strategic responses to overcome crises like the Covid-19 pandemic.

The speed of reactions in response to the current rapidly evolving epidemic is the key, like China and South Korea demonstrated in the last months (e.g. by adopting apps for detecting people in close contact with Covid-19 cases). The sense of collaboration between business and institutions should be increased, so that the virus can be fought together and the fragile economy can recover. From now on, nothing will be the same anymore.

Notes

1. VIX is a closely watched measure of volatility in US stocks.
2. <https://www.hollywoodreporter.com/news/film-industry-facing-5-billion-loss-coronavirus-outbreak-1282038>
3. The International Finance Corporation is a World Bank Group.

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