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How managers are critical for largescale public crisis management – lessons from India

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Abstract

In a world fraught with uncertainty, unforeseen large-scale events have the power to bring entire economies to a standstill. In this article we argue that how a country handles a public crisis in the wake of such uncontrollable external pressures, depends critically on the country's managers. Through careful analysis of large-scale crisis situations that have hit multiple geographies in the world, such as the Tsunami of 2004 and COVID-2019, we identify four generic capabilities that are necessary to manage crises of such magnitudes: (i) Production and Procurement capability, (ii) Coordination or Network Orchestration Capability (iii) Distribution & Logistics Capability and (iv) Local Governance Capability. Since not all four capabilities are likely to be present in a single organizational form, we propose that handling a large-scale crisis requires hybrid forms of organization that combine the strengths of firms, governments, and NGOs (or community organizations). We refute the view of the manager's peripheral role in crisis management, held by most classical theories of crisis management. To empirically support our conceptual findings above, and to gain a broader view of how major firms responded to the Covid-19 lockdown in India, we analysed the Twitter feed of the major Indian corporations listed in India's National Stock Exchange. This analysis revealed that, post lockdown the discussion centered around distribution of food and other supplies, as well as provision of healthcare facilities, which were found to be major challenges during the Covid-19 lockdown period in India. We expanded our analysis further by collecting and reviewing several articles from business press and academic literature. A deeper examination and a careful search in international and Indian business press revealed that, managers from for-profit firms did play a significant and central role in management of Covid-19 crisis during the 3 month lockdown period, by making use of the above capabilities and by actively coordinating with other organizational forms, especially in case of India. Based on the Indian experience of managing the COVID-19 crisis, we propose a generic framework to help managers in orchestrating a collaboration between various organizational forms to meet the immediate needs of a largescale crisis in an agile fashion.

How managers are critical for largescale public crisis management – lessons from India

*"**As large corporations, we can take this step and should. As our community focuses on public health needs during the COVID-19 outbreak, it's important that we also rally together to address the unmet economic needs developing around us.**"*

---- Microsoft President Brad Smith

On March 24th, 2020, the Government of India imposed a stringent national lockdown on the country of 1.3 billion, as Covid-19 pandemic had necessitated clampdown of an unprecedented scale. In a country as vast and densely populated as India, with nothing of note in the public healthcare system to speak of, there was perhaps little hope for another option. India had only 57,000 ventilators at the start of the pandemic, whereas studies estimated that the infections in India at the peak of the pandemic could range anywhere between 125 million to 240 million people[1]. In this hour of public crisis, Anand Mahindra, chairman of one of India's largest private business groups came forward to help, going beyond just funds and assistance from their traditional domains of business. Mr. Mahindra offered his group's automobile production resources and capabilities, tweeting "*we at the Mahindra Group will immediately begin work on how our manufacturing facilities can make ventilators*." Possessing deep production, service and logistical networks in India, he also offered his resorts and personnel, to assist the government in turning Mahindra's spaces into temporary care facilities. Mahindra was one of the many firms that focused on developing and producing low-cost ventilators that suited India's needs. In three months of lockdown period, India reached from a significant shortage to having excess production capacity of ventilators.

In a world fraught with uncertainty, unforeseen large-scale events have the power to bring entire economies to a standstill. In this article we argue that how a country's economy fares in the wake of such uncontrollable external pressures, depends critically on the country's managers. We further argue that *the more massive the public crisis, the more vital the private manager becomes* to a country's response strategy.

During a crisis, it is common for the public attention to be focused on the government and its elected leaders, or on communities and non-governmental organizations who are typically at the forefront of relief and recovery efforts. Governments play the role of coordinators, and NGOs play the role of making last person connections – both performing the activities naturally suited to their organizational forms. However, the procurement, production and distribution capabilities of firms and the ability of managers to evoke them are unique and necessary during a crisis. Therefore, we contest that, the resources and capabilities held by firms in an economy are the backbone of any effective relief and recovery effort, and managers are therefore central actors in any crisis response. We offer a framework on how managers can deal with such public crises, emphasizing that during a public crisis, managers should think about what core resources and capabilities they have access to, and how they can be retooled to meet the needs of the crises.

Recent management research[2] argues that firms, vis-à-vis other organizational forms, are better suited to solve certain social problems– as they are better at undertaking innovation and coordinating production economies – but less suited for those social problems that involve information asymmetry and negative externalities. Hence, we propose that handling a large-scale crisis requires hybrid forms of organization that combine the strengths of firms, governments, and NGOs (or community

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[1] https://cddep.org/wp-content/uploads/2020/03/covid19.indiasim.March23-2-eK.pdf
[2] Luo, J, Kaul, A. Private action in public interest: The comparative governance of social issues. *Strat Mgmt J.* 2019; 40: 476– 502. https://doi.org/10.1002/smj.2961

organizations). We refute the view of the manager's peripheral role, held by most classical theories of crisis management.

A natural question one may ask is: if firms and managers are so central to emergency response in society, why has their role as a key stakeholder in crisis management thus far been ignored? Over the past few decades, no disaster was large enough to pull the entire global economy to a grinding halt. In these smaller scale crises, governments and NGOs – who work under the public spotlight – could continue to be effective, while relying upon the invisible resources, capabilities and supply chains of firms in the background.

However, the current COVID-19 pandemic has disrupted the global economy. As governments around the world have enacted national lockdowns to contain the spread of the pandemic, the economic machine has come to a halt and many businesses have been left idle. This in turn has made providing relief and recovery to affected people exceptionally difficult, exposing the handicapped nature of governments and NGOs. The challenges have been especially exceptional for developing counties like India – where governments have traditionally had limited state capacity— in comparison to countries that are economically better off. Thus, the COVID-19 catastrophe has demonstrated that a collaborative effort from all organizational forms, including for-profit firms, is necessary to efficiently and effectively manage a crisis of this magnitude; and managers, therefore, have a key role to play.

While most corporate CEOs demonstrate their corporate social responsibility (CSR) through monetary donations, the biggest impact can be made by getting directly involved in relief activities like Mr. Mahindra did. From a managerial perspective, participation in relief activities not only increases a firm's credibility and goodwill in the eyes of the external stakeholders (such as regulators, customers and society in general), but also enables the manager to understand the changing needs of customers better. For instance, Reliance Industries Ltd, one of the largest business groups in India, converted a gap in the economy left by the COVID-19 crisis into an opportunity to fast-track its budding e-retail business – the Reliance JioMart. By actively participating in crisis management, JioMart came out at the other side of the lockdown as a major contender in the industry.

What capabilities do firm managers command during a crisis?

Different aspects of relief and recovery during a crisis are better managed by different organizational forms; and managers – not just politicians and community leaders – are central stakeholders in crisis management. After carefully analysing large-scale crisis situations that have hit multiple geographies in the world, such as the Tsunami of 2004 and COVID-2019, we find that the following four generic capabilities are necessary to manage crises of this magnitude, and while managers of for-profit firms command two of these four critical capabilities, they can complement governments and NGOs in others.

Production & Procurement Capability

We club production and procurement capabilities together, since most firms that engage in the production of goods and services, also possess procurement capabilities. By nature, firms are organized most efficiently to produce goods and services. The need for raw materials and other resources makes them part of extensive supply chain networks, giving managers access to a variety of resources and a network of actors. These are important capabilities in a crisis, especially to address sudden demand. For instance, during the COVID-19 crisis, to address the shortage of ventilators across the nations, several firms in the automobile industry came together and collaborated with firms in the medical devise sector to ramp up the ventilator production capacity on war-footing.

National governments also possess production and procurement capabilities but in a limited fashion; in areas such as Defense and Healthcare, and only to the extent of their investments. NGOs are least likely to possess these capabilities, since they are mostly focused on coordinating last mile delivery of services and goods to the needy, with the exception of those operating in the provision of healthcare.

Coordination or Network Orchestration Capability

Crisis management requires effective coordination between various entities and networks to ensure that relief related material and services are delivered in a timely manner. Governments have authority over the entirety of state machinery – at central, provincial, district and neighborhood/village level – and therefore possess significant coordination capabilities.

This level of coordination entails the procurement and delivery of different types of goods and services at a large-scale, for which individual firms are unlikely to possess the required capabilities. Managers may be able to orchestrate their networks in a moderate to limited fashion, depending upon the size and reach (through dealer and supplier networks) of their firms and their presence at national or regional levels. Like firms, NGOs – some with a broad presence across multiple states, others with a local presence within specific regions – have only moderate to limited coordination capabilities.

Distribution & Logistics Capability

Firms that specialize in the distribution of goods (such as ecommerce, courier and parcel delivery firms), by nature, possess significant capabilities in distribution & logistics, for these are their core business capabilities. Managers commanding such capabilities play a critical role during crisis situations, when there is a pressing need for the efficient and speedy transport of material and manpower to wherever they are needed the most. For instance, during the COVID-19 lockdown of Wuhan, Chinese ecommerce giants Alibaba and JD.com used their logistic capabilities to ensure that essential food and medicines were delivered to the residents of the city in a safe and secure manner[3].

Governments do possess moderate logistics capabilities in the form of military resources and have access to mobile telephony/digital networks. Some, like the Indian Government, also have access to public distribution systems (PDS) through which they can ensure the supply of essential items to the affected areas. NGOs, on the other hand, are least likely to possess distribution & logistics capabilities, as they are mostly local or hyper-local in nature.

Local Governance Capability

While the Government plays the key role of leadership and central coordination, NGOs, with their ability to connect relief efforts to those in actual need, can act as fiduciary organizations between those affected by the crisis and the broader economy/state. Thus, NGOs can take on the role of local governance – resolving information asymmetry and monitoring for leaks (moral hazard) at the last person/last mile level, which are activities that these non-market actors are very good at.

Being for-profit entities, firms have lower capabilities and incentive to precisely track ground level information asymmetries, or to verify that all those in need have received their due. Nonetheless, the CSR arms of firms are often effectively organized as NGOs, and they can contribute during a crisis in a similar manner as other NGOs. Governments, on the other hand, though well-positioned to eliminate information asymmetry, are prone to allowing bureaucracy to get in the way of getting the job done.

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[3] https://hbr.org/2020/04/in-the-face-of-lockdown-chinas-e-commerce-giants-deliver

The following table delineates the various organizational forms, in terms of their respective strengths and weaknesses in the above capabilities.

	Procure/Produce (Scale, Innovation)	Coordinate (Network Orchestration)	Reach (Distribution & Logistics)	Resolve Market Frictions (Local Governance)
Government	**Limited** – only available to salient public sector organizations. E.g. Government hospitals, Defence establishments **e.g.** Government of India created the world's largest Covid Hospital in Delhi with a capacity of 10,000 beds, provided testing and treatment to Covid patients	**Significant** – have access to the entirety of state machinery, at central, state, district & neighborhood level **e.g.** State & central governments coordinated the tracing & tracking of potential Corona infected patients	**Moderate to Limited** – depending on whether public sector and military resources can be deployed **e.g.** Used Indian Railways to help migrant workers reach their hometowns	**Moderate to Limited** – depends on the local governance structures, influencing the efficiency and reach of the local governments **e.g.** Used the Public Distribution System (PDS) to provide ration to the poor and daily wage workers
NGOs	**Limited** – can operate only to the extent of availability of funds and cooperation of local businesses	**Moderate to Limited** – depending upon geographical reach	**Moderate to Limited** – Can enable last mile delivery of essentials to the people in need **e.g.** CII Foundation helped several vulnerable communities by ensuring that relief material was made available locally	**Significant** – are good at reducing information asymmetry, monitoring of leakages and ensuring the last mile/person delivery **e.g.** An NGO named SWAN emerged to help migrant workers stranded in the crisis with essential supplies
Firms	**Significant** – due to existing supplier networks, design and development capabilities, and production facilities **e.g.** Mahindra tied up with BEL & BHEL to design & scale up production of ventilators and Ambu bags	**Moderate to Significant** – due to their access to and influence over dealer and supplier networks and depending upon their presence at the state or national level. **e.g.** managers in India coordinated relief activities across the country using industry associations like CII, SIAM and ACMA	**Significant** – in case of firms with logistic capabilities, such as ecommerce, FMCG and parcel delivery services, that can reach small retailers in every nook and corner of the country **e.g.** Amazon managers used their logistics capabilities to deliver not just food items to consumers, but also PPEs to doctors & hospitals	**Limited** – Managers of for-profit entities, have limited capabilities to deal with the local and hyper local frictions related to relief related activities. However the CSR activities of the firms are often organized as Foundations and NGOs, and hence such CSR arms may have NGO like capabilities.

Table 1. Critical Organizational Forms and Capabilities in Times of Crisis

Challenges and Management of India's COVID-19 Crisis

With an objective to prevent the oncoming epidemic, the Government of India imposed a three-week stringent national lockdown on March 24th, 2020. The lockdown, which continued for more than two months till 31st May, imposed a ban on all domestic and international travel, shutting down all offices, factories, educational institutions, malls, and shops catering to "non-essential" services. States in turn put a halt on all public and private transportation, including interstate transport, thus bringing the entire nation to a standstill. The scale and the severity of the lockdown was noted by international bodies[4] as one of the most stringent, where the entire economy effectively came to a halt.

To get a broader view of how major firms responded to the lockdown we analysed the Twitter feed of the major Indian corporations listed in India's National Stock Exchange, and found that after lockdown companies began to focus on distribution of food and other supplies, as well as provision of healthcare facilities. We

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[4] https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker

expanded our analysis further by collecting and reviewing several articles from business press and academic literature. This analysis revealed that, due to the severity of the lockdown, the poor pre-existing state capacity, and an inadequate social safety net[5], India faced two major challenges – the production and delivery of essential food items, and healthcare services to its 1.3 billion residents[6].

A deeper examination and a careful search in international business press, such as Wall Street Journal, New York Times, Guardian, Financial Times, Forbes etc. and within Indian business press, such as Economic Times, Mint, Hindu Business Line etc. revealed that, firms played a significant and central role in management of Covid-19 crisis, by making use of the above capabilities and by actively coordinating with other organizations, especially in case of India.

Below, we describe how the various organizational forms, with their respective strengths in the four capabilities discussed above, came together to address the challenges posed during Covid-19 lockdown in India, especially highlighting how managerial leadership played a key role in plugging the gaps.

Production and delivery of essential items during the lockdown

While the production of essential items was allowed during the lockdown, the fear of contracting the virus and the lack of availability of public transport made it difficult to retain the manpower needed to operate these facilities. Several firms in this sector came forward to put in place extra safety precautions and social distancing norms – some even provided their own transportation and/or lodging facilities to the workers – in order to continue production (albeit at a lower capacity). The next challenge to emerge was that of the distribution of goods amidst a lockdown that included a ban on interstate travel.

India's retail sector, which is primarily responsible for the delivery of essential items, is largely unorganized – dominated by nearly 13 million kirana shops (traditional Mom & Pop stores), as opposed to only about 7,000 modern stores. These kirana shops are typically supplied by an intricate web of wholesalers, distributors and manufacturers spread far and wide. To ensure the distribution of essentials across the country under lockdown, firms had to coordinate with central and state governments. Companies such as Britannia, Parle, PepsiCo, Hindustan Unilever (HUL), Dabur, Coca-Cola, ITC, Nestle and Mondelez wrote to the government through three separate industry bodies, seeking immediate exemption from movement restrictions on the very first day of the lockdown. Answering these requests, the central government coordinated with the respective state governments for smoother transportation of essential goods across states.

To ensure last mile delivery of goods to the end consumers, Ecommerce companies such as Amazon, Flipkart and Grofers ramped up their essential product lines significantly and transformed most of their storage, distribution and delivery capacity to meet lockdown guidelines. With distributors of several FMCG companies struggling due to the unavailability of drivers, Amazon India came to the rescue with its logistics capabilities and began supplying to local kirana stores through single day deliveries. This not only ensured uninterrupted supply to kirana stores, but also reduced their in-bound delivery lead times from 4 days to 1 day. In addition, the kirana stores could place a single order with Amazon for most of their bulk purchases, leading to improved efficiencies. Amazon proactively entered into arrangements with food delivery companies such as Swiggy and Zomato, who had swathes of unused capacity as a result of the ban on cooked meal deliveries. Reliance Jio, a large mobile network operator that caters to more than 50% of India's internet user base, had made its entry into online retail with Reliance JioMart just before COVID-19 hit the country. To help meet the increased demand for online groceries during the lockdown, JioMart tied up with local Kirana stores across 200 Indian cities, offering them Merchant Point of Sale devices that help with managing

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[5] http://www.businessworld.in/article/Need-To-Improve-Emergency-Funding-In-India/17-04-2020-189481
[6] https://www.nytimes.com/2020/03/25/opinion/india-coronavirus-lockdown.html?searchResultPosition=8

inventory, to maintain digital records, improve working capital management, accept digital payments and in filing returns. JioMart also enabled them to obtain the necessary logistics for in-bound and out-bound deliveries.

Managers of Ecommerce companies and FMCG distributers also tied up with the government-owned Indian Railways, to ramp up their in-bound and out-bound logistic capacities. Several NGOs and civil society organizations made pleas to the local and central governments – in some cases even reaching out to courts through public interest litigations (PILs) – to ensure that India's food and agriculture industry was not affected severely due to lockdown measures; that labour would be allowed to travel for harvesting, and adequate storage and processing of food items would continue during the lockdown period.

Management of the COVID-19 Pandemic and Delivery of Healthcare Services

The unprecedented scale of the pandemic and a history of poor investment in public health meant that the Indian government did not have adequate means to ramp up healthcare capacity to meet the oncoming demand. It was the private sector managers and civil society activists that swung into action to ensure adequate supply of ICU beds, personal protection equipment (PPE), hand sanitizers, face masks, ventilators etc. Given that India had only 57,000 ventilators at the start of the pandemic, it was essential to increase ventilator capacity to support severely affected patients. Three of the top automakers in India – Maruti Suzuki, Mahindra and Tata Motors – came forward to make 50,000 ventilators by May 2020, through technology tie ups with medical device manufacturers such as SkanRay and AgVa. Mahindra also engaged with public sector entities like BEL and BHEL to reduce the manufacturing cost of ventilators and automated Ambu bags through design simplifications and production scale ups, along with upping the supply of face masks, face shields etc.[7] The auto component manufacturers of Krishna Group volunteered to make components for ventilators and face masks, while Bharat Seats decided to manufacture PPE. Similar such examples can be found in USA and Europe, wherein firms in the auto industry came forward to make ventilators and PPE for the frontline workers, using their production and procurement capabilities (see Table 2).

Firm Capabilities	India	US	Europe	Role in Crisis Management
Production & Procurement	Maruti Suzuki, Mahindra, Tata Motors, SkanRay, AgVa, BHEL, BEL, Krishna Group, Bharat Seats, ideaForge, TVS Group, 3M, HUL, Godrej Group	Apple, Fanatics, Ford, GM, Tesla, Nike, Ralph Lauren, Uniqlo, Caleres and Crocs, Johnson & Johnson, Bacardi, 3M	Zara, Nivea, Dyson, Givenchy, Christian Dior, McLaren and Nissan, Airbus, Vauxhall, Jaguar Land Rover, Renishaw, JCB, Randox, Roche, British Honey Company	Helped with production of ventilators, respirators, testing kits, drones, PPE, face masks, hospital gowns, hand sanitizers, soaps, detergents etc.
Coordination	CIIF, SIAM, ACMA	Amazon	Meggitt, Novo Nordisk, Takeda	Coordinated relief activities across the country using the network of firms and their foundations
Distribution & Logistics	Amazon, Flipkart, Grofers, Reliance JioMart, BPCL, RIL, Uber	Amazon, Hertz, Airbnb, U-Haul, Uber	Deliveroo, Green King	Helped with distribution of essential food items, PPE to doctors & hospitals, housing for healthcare workers
Local Governance	CII Young Indians, CII Indian Women Network, Infosys Foundation	Pepsico, Team Rubicon	MSD, Takeda UK, Boehringer Ingelheim, Johnson & Johnson	Helped with distribution of relief material and activities within the local regions

Table 2. List of firms across India, USA and Europe involved in COVID-19 related relief efforts

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[7] https://prime.economictimes.indiatimes.com/news/74957566/transportation/how-to-use-idle-plants-supply-chain-maruti-mm-tata-are-driving-in-with-face-masks-ventilators

Ecommerce companies chipped in with their logistics capabilities to bridge the delivery gaps. For instance, Amazon India facilitated the supply of PPE, soaps, sanitizers and detergents etc. to hospitals and doctors, by offering their delivery services free of cost. During the second phase of the lockdown, several private labs and hospitals came forward for testing and treatment of patients, and a few companies were roped in for RT-PCR test-kit production in order to increase testing capacity. Apollo Hospitals – the largest private hospital chain in India, with a 10,000 bed capacity – came forward and created another 500 ICU bed capacity, with a plan to scale it up to 5,000 if necessary. Apollo also got the supply chains of their 3,500 pharmacies ready to procure PPEs, medicines, ventilators, and ramped up their telemedicine services to reduce the patients' need to visit hospitals. Several other companies coordinated through the Confederation of Indian Industry (CII) Foundation, to donate health and hygiene materials to vulnerable populations and frontline workers.

To help the worst affected states, like Maharashtra, ideaForge – a company engaged in the development of unmanned aerial systems – deployed drones to help police forces impose security surveillance and monitor social distancing within communities [8]. From civil society, volunteer groups like Coronathon.in sprung up overnight, enlisting thousands of developers from India's tech, business & healthcare communities to build various resources aimed at reducing COVID-19's impact on India. Some of these include – the development of a Covid-19 Dashboard for state Chief Ministers; the creation of platforms that connect PPE donors, requesters and suppliers to help frontline workers facing PPE shortage; an App to help hospitals better manage the influx of Covid-19 patients.

Role of managerial leadership in management of a crisis

"***Never waste a crisis, they say! A wise colleague mentioned today, 'Alibaba also flourished starting from the SARS crisis'***" --- Damodar Mall, CEO – Reliance JioMart

Based on the Indian experience of managing the COVID-19 crisis, we propose the following generic framework (see Figure 1) to help managers in orchestrating a collaboration between various organizational forms to meet the immediate needs of a crisis in an agile fashion.

As per our framework, when a crisis hits a country, it is important for managers – through their industry associations – to collaborate with the government, and to participate in the identification of the resources and capabilities that are necessary to address the immediate needs of the affected parties. Instead of narrowing their focus on their immediate business verticals, managers must take stock of their core resources and capabilities that can be best retooled to meet the needs of the crisis. Next, managers must collaborate with other firms and government institutions in redesign, redevelopment and scaling up of their capabilities – as their existing internal capabilities alone are unlikely to suffice in meeting the needs of a large-scale crisis.

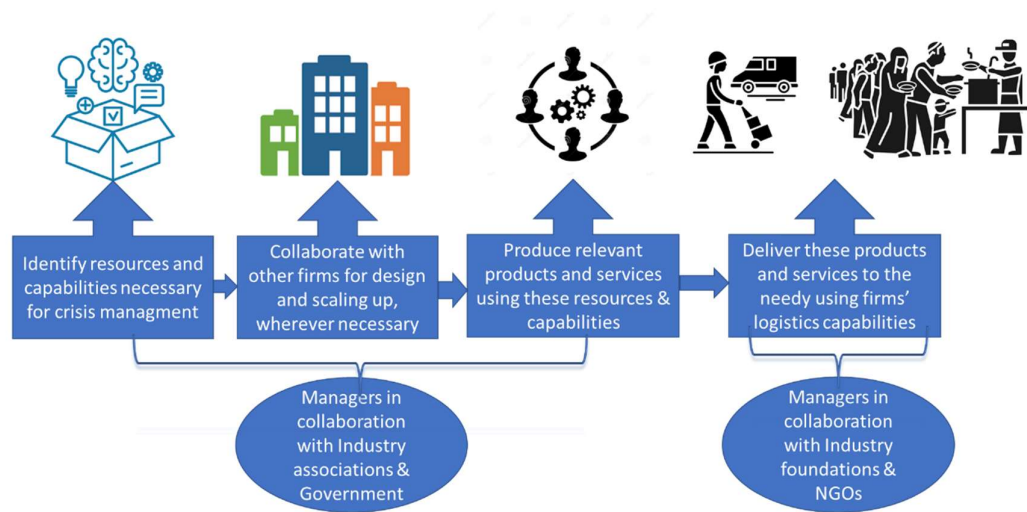[8] https://yourstory.com/2020/04/ideaforge-drones-monitor-social-distancing-coronavirus

Figure 1. A generic framework for managers to take part in crisis management

The third step in the framework is the production of necessary goods and services through these collaborative efforts, where managers once again are key actors, either as procurement or production specialists. Finally, the coordinating agency (usually the government) must ensure that these products and services are delivered to the affected population without delay, using the distribution and logistics capabilities of the enlisted organizations. Since NGOs and charitable foundations are good at local governance, managers should make use of them for effective last mile delivery.

As the world economy struggles to get back to its feet, there is a much higher need for coordination between the governments, NGOs and firms to spur demand and economic revitalization. The natural question that arises is, what's in it for firms? Why should managers venture into crisis management? Based on anecdotal evidence, we have found that in addition to the fulfilment of CSR and thus generated goodwill, such participation has the potential to generate new business opportunities for firms. Although there are several examples, we make use of the case of Reliance JioMart in India to demonstrate this.

Reliance JioMart, a platform that connects Reliance Retail stores and neighborhood kirana stores with end consumers for the delivery of groceries, was piloted just a few weeks before Covid-19 hit India. During the lockdown, JioMart entered into a commercial agreement with Whatsapp, a messaging service of Facebook widely used in India. This aggressive move during the pandemic allowed Reliance to access 400 million Indians – including those living in densely populated, worst hit cities like Mumbai – and ramp up its JioMart services to 200 cities across India by 31st May. The action of enabling the delivery of essentials during the crisis put Reliance well on its way to meeting its target of tying up with 60 million micro, small and medium enterprises and 30 million kirana stores over the next few years[9]. The success of Reliance JioMart also helped attract several billion dollars' worth of investments in Reliance Jio platforms within a couple of months[10].

The post-Covid future, by all accounts, is going to be a more digitalized world. By expanding its scale and scope during the crisis through Jio platforms, Reliance Industries Ltd – a company traditionally

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[9] https://economictimes.indiatimes.com/tech/internet/covid-19-to-accelerate-digital-adoption-in-india-jio-helped-spur-internet-usage-morgan-stanley/articleshow/76031939.cms

[10] These investments, amounting to more than $13 billion, were made by Facebook and private equity firms KKR, Silver Lake, Vista Equity Partners, General Atlantic, Mubadala, TPG and L Catterton https://www.businesstoday.in/current/corporate/10-deals-in-53-days-jio-platforms-rakes-in-whopping-rs-104-lakh-crore-here-timeline/story/406886.html

mired in more conventional businesses such as Energy, petrochemicals, textiles, and retail – has exploited its telecommunications based core capabilities to build a stronger base for its digital future. Similarly, companies from the automotive and medical devise industries who contributed to the development and manufacturing of ventilators, PPE, testing and other related products during the crisis, have discovered their dormant capabilities that can enable diverse business opportunities. Considering the uncertain future the COVID-19 crisis has created for various businesses across the world, these firms have a better understanding of the market, and are better prepared to face the future, compared to counterparts who did not partake in the crisis management.