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Research on the Legal System of Administrative Emergency in the Context of COVID-19

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Abstract

The COVID-19 pandemic exposed significant gaps in corporate emergency management, highlighting the need for stronger legal frameworks, regulatory coordination, and corporate governance structures. This study compares corporate emergency response systems in the United States, the European Union, and China, examining key legal requirements, enforcement mechanisms, and internal corporate strategies. The analysis identifies challenges such as inconsistent regulations, enforcement gaps, and weak internal compliance structures, particularly in multinational corporations (MNCs) and state-owned enterprises (SOEs). To address these issues, the study proposes legislative reforms, improved regulatory enforcement, enhanced corporate governance, and greater international cooperation. By adopting clear legal mandates, strengthening compliance mechanisms, and aligning with global standards from organizations like WHO and ILO, businesses and governments can enhance corporate resilience and ensure sustainable crisis management in the future.

Keywords: Corporate emergency management, Public health emergency law, Emergency administrative law, Stakeholder engagement, Remote work policies

1. Introduction

The COVID-19 pandemic has profoundly reshaped the global economy and society, creating unprecedented challenges for businesses across industries. Many companies faced operational disruptions, declining revenues, and financial instability as lockdowns and shifting consumer behaviors altered market dynamics (Bick, Blandin, & Mertens, 2022). The fragility of global supply chains became increasingly evident, with production halts, logistical bottlenecks, and trade restrictions causing significant delays and shortages. At the same time, remote work rapidly became a necessity rather than a choice, forcing companies to adapt their technological infrastructure, workflow management, and employee oversight practices. Furthermore, workforce management grew more complex, as businesses had to navigate evolving labor regulations, occupational health and safety measures, and the need for greater workplace flexibility to accommodate employees' changing needs (Choi & Choi, 2024).

The field of emergency administration has traditionally focused on government responses to crises, while corporate emergency management has received comparatively less academic and policy attention. Most existing studies emphasize governmental regulatory frameworks, public health interventions, and crisis coordination mechanisms, often overlooking the critical role of businesses in maintaining economic stability and social continuity during emergencies. While corporate risk management and business continuity planning are recognized in management and legal studies, there remains a gap in comprehensive research on how legal frameworks can enhance corporate emergency preparedness and response (Brynjolfsson et al., 2024). The COVID-19 pandemic has highlighted the need for companies to develop legally sound and efficient emergency strategies, yet many firms faced uncertainties regarding regulatory compliance, contractual obligations, and workforce protection. As a result, the lack of focused research on corporate emergency governance and legal preparedness has become increasingly evident, necessitating a deeper exploration of legal mechanisms that can enhance corporate resilience in future crises (Boyd, 2020).

The establishment of a robust corporate emergency legal framework is not only essential for the survival and growth of businesses but also plays a crucial role in maintaining overall social stability. In times of crisis, companies must navigate complex legal obligations related to labor rights, contractual performance, supply chain disruptions, and regulatory compliance, all of which directly impact their ability to sustain operations (Kaufman & Canoles, 2020). A well-defined legal structure governing corporate emergency response can help mitigate economic shocks, protect employees and stakeholders, and ensure business continuity in unpredictable situations. Moreover, businesses are integral to critical infrastructure, public services, and economic ecosystems, meaning their failure to respond effectively to emergencies can lead to widespread financial distress, unemployment, and market instability. Given the increasing frequency and severity of global crises, establishing clear and enforceable corporate emergency laws is imperative to strengthening both individual business resilience and broader economic security.

This paper aims to address the critical legal and administrative challenges companies face when responding to public health crises and other emergencies. Specifically, it seeks to examine the legal responsibilities and obligations that businesses must fulfill during such crises, evaluate the adequacy of existing corporate emergency laws, and identify gaps that hinder effective crisis response. By analyzing case studies and comparative legal frameworks, this research will explore how businesses can leverage legal mechanisms, governance structures, and compliance strategies to enhance their resilience. The ultimate goal is to provide concrete recommendations for improving corporate emergency legislation and internal regulatory frameworks, ensuring that businesses can swiftly and lawfully adapt to unforeseen disruptions. Through this analysis, the paper aims to contribute to both corporate governance practices and legislative policymaking, fostering a more legally sound and proactive approach to business continuity in times of crisis.

2. Literature Review

The study of corporate emergency management has evolved significantly, encompassing both theoretical frameworks and practical applications. Ian Mitroff's seminal work on crisis management introduced a five-stage model—signal detection, probing and prevention, damage containment, recovery, and learning—that has been widely adopted to understand organizational responses to crises. Additionally, the development of standards such as ISO 22320:2018, "Security and resilience—Emergency management—Guidelines for incident management," provides organizations with structured guidelines to enhance their emergency preparedness and response capabilities (AlertMedia, 2025) . Despite these advancements, there remains a notable gap in research focusing on compliance mechanisms at the company level. Existing studies often emphasize governmental and public sector emergency management, leaving corporate compliance strategies underexplored. This oversight underscores the need for more targeted research into how businesses can develop and implement effective compliance mechanisms to navigate emergencies effectively (International Organization for Standardization, 2018).

Public health emergencies have prompted the enactment of various regulations aimed at guiding organizational responses. In the United States, the Public Readiness and Emergency Preparedness Act (PREPA) provides liability protections for entities involved in producing and distributing medical countermeasures during public health emergencies. Similarly, the Pandemic and All-Hazards Preparedness Reauthorization Act of 2013 enhances the nation's preparedness for public health emergencies by improving the development and availability of medical countermeasures (Mitroff & Anagnos, 2000). Companies are required to comply with these regulations, which encompass statutory employment requirements, employee health and safety obligations, and data privacy compliance, particularly concerning the collection of health data. However, the effectiveness of these regulations and the extent of corporate compliance vary, highlighting the need for further research into optimizing legal frameworks to support corporate emergency preparedness.

The integration of Corporate Social Responsibility (CSR) and Environmental, Social, and Governance (ESG) factors has become increasingly influential in shaping corporate emergency management strategies. Companies are now expected to uphold responsibilities that extend beyond traditional business obligations, encompassing broader societal and environmental considerations (Cooper-Johnson, 2024). The role of internal audit and legal compliance departments has also become more prominent in guiding corporate responses to emergencies. For instance, the adoption of the Incident Command System (ICS) within organizations facilitates a standardized approach to emergency response, enhancing coordination and decision-making processes. Moreover, the implementation of robust whistleblowing systems has been identified as a critical component of effective corporate governance, enabling early detection and mitigation of potential crises. These developments reflect a shift towards more comprehensive and proactive compliance management practices within corporate governance frameworks.

While significant progress has been made in understanding corporate emergency management, existing research often lacks a systematic legal framework tailored to the corporate context, particularly in the face of major public health crises. This gap is evident in the limited exploration of compliance mechanisms that businesses can adopt to effectively manage emergencies. Addressing this gap is crucial for enhancing both academic understanding and practical application of corporate emergency preparedness. This paper aims to fill this void by examining how legal frameworks can be refined and internal corporate systems can be developed to bolster companies' abilities to respond to unforeseen events efficiently and effectively.

3. Theoretical Framework

Corporate emergency administration refers to a company's strategic planning and execution of emergency measures in internal administration, human resources management, risk control, and supply chain management (Federal Emergency Management Agency, 2020). It focuses on ensuring operational continuity, employee safety, and regulatory compliance during crises. Emergency legal frameworks, on the other hand, encompass binding laws, administrative orders, industry standards, and corporate self-regulatory policies that dictate how businesses must respond to public crises or unforeseen events. These legal structures establish the boundaries for corporate decision-making, ensuring that emergency responses align with legal obligations and societal expectations. By integrating corporate emergency administration with robust legal frameworks, businesses can enhance resilience, mitigate risks, and maintain stability during disruptive events.

Corporate emergency management is governed by various legal frameworks that define responsibilities and regulatory obligations (Federal Emergency Management Agency, 2020). Corporate law establishes the governance structure of companies, outlining the decision-making authority and emergency response responsibilities of the board of directors and management. Labor law and related regulations govern employment relationships, providing the legal basis for remote work, mandatory quarantine policies, contract modifications, and workplace safety obligations during crises. Administrative law and emergency law dictate government mandates on businesses, including the enforcement of public health measures, compliance with emergency orders, and operational restrictions during states of emergency. Additionally, data protection and cybersecurity laws regulate the handling of personal and company data in remote work settings, ensuring privacy and security compliance. Together, these legal frameworks shape corporate emergency responses, balancing business continuity with legal and social responsibilities.

In an era of increasing uncertainty, risk society theory emphasizes the need for businesses to develop dynamic risk identification and response mechanisms to adapt to evolving threats. Companies must proactively assess potential crises, implement contingency plans, and establish flexible governance structures to mitigate disruptions. Meanwhile, compliance and corporate social responsibility (CSR) theory highlights that businesses, beyond ensuring operational efficiency and profitability, must also fulfill broader societal obligations during public crises. This includes safeguarding employee welfare, adhering to legal and ethical standards, and contributing to community resilience (Federal Emergency Management Agency, 2020). By integrating risk management with compliance and CSR principles, companies can enhance their long-term sustainability while fostering trust among stakeholders.

4. Comparison between Countries

4.1 Business Closures and Suspensions

In the United States, state and local authorities issued emergency "stay-at-home" orders that forced all non-essential businesses to cease on-site operations during COVID-19 surges (Enforcement of Business Closure Orders During the Coronavirus Outbreak) (National Governors Association, 2020). Essential sectors (e.g. food, healthcare, critical infrastructure) were allowed to remain open with restrictions, while remote work was encouraged wherever possible (Enforcement of Business Closure Orders During the Coronavirus Outbreak). In the European Union, virtually all member states enacted lockdown measures under public health emergency laws, requiring temporary closure of offices, shops, and factories deemed non-essential. Nearly half of EU businesses had to shut down or curtail operations at some point in 2020 due to these lockdowns (Business not as usual: How EU companies adapted to the COVID-19 pandemic) (Duston, 2020). China's response was even more sweeping – authorities imposed strict lockdowns (especially in early 2020) that mandated the closure of most workplaces to contain the outbreak. Enterprises could only resume work with official approval and after implementing government-mandated disease control measures (Labor and employment in China – Guidance on business operations and workplace health and safety as the COVID-19 situation in China improves) (Yang, 2020). Notably, Chinese regulators explicitly barred companies from terminating employees during the government-ordered shutdown periods, effectively freezing layoffs while business was suspended (Yang, 2020).

4.2 Health Protection Measures for Employees

Governments in all three regions introduced workplace health requirements to protect employees who continued working. U.S. agencies like the CDC and OSHA issued COVID-19 safety guidelines (distancing, sanitization, ventilation, etc.), and many states imposed specific rules (e.g. mask mandates, capacity limits) for businesses allowed to operate (Which States and Cities Have Adopted Comprehensive COVID-19 Worker Protections?) (Berkowitz, 2021). However, early in the pandemic there was a gap at the federal level – OSHA did not issue a national COVID-19 standard in 2020, leaving a patchwork of state rules (Which States and Cities Have Adopted Comprehensive COVID-19 Worker Protections?). In the EU, employers have a general duty under occupational safety laws to ensure a safe workplace, which was reinforced with COVID-specific measures. Many European countries required employers to conduct COVID-19 risk assessments and implement preventive steps (mandatory face masks, physical distancing, plexiglass barriers, enhanced cleaning) (COVID-19 in the workplace: Employer's responsibility to ensure a safe workplace). Several governments (e.g. Italy) worked with unions and business groups to develop detailed safety protocols, making health measures like testing and sanitation part of enforceable national guidelines. China instituted very rigorous health-protection mandates as a precondition for reopening (Allinger & Adam, 2022). Companies were obliged to monitor employee health (daily temperature checks, health QR codes), report any infections to public authorities immediately, and enforce quarantine for exposed staff (Labor and employment in China – Guidance on business operations and workplace health and safety as the COVID-19 situation in China improves). Employers had to provide PPE (masks, gloves) and hygiene supplies to all workers and disinfect workplaces regularly (Yang, 2020). Noncompliance with these infection control measures in China could trigger legal liability, including potential criminal penalties.

4.3 Remote Work Policies and Obligations

Telework became a critical tool during the pandemic, but legal approaches differed. In the U.S., there was no nationwide legal mandate to work from home; however, the closure of workplaces effectively compelled a massive shift to remote work for "non-essential" employees. Companies had to quickly enable telecommuting, and some states urged or required employers to maximize telework when possible (e.g. local orders instructed businesses to let employees work from home if their jobs allowed it). Generally, U.S. labor law treated remote work as a voluntary arrangement, though employers still had to follow existing laws (for example, OSHA's general duty of care and reimbursement rules for home office expenses in certain states). In the EU, many governments strongly recommended or even mandated teleworking for white-collar roles to reduce contact. While no EU-wide law on remote work exists, several countries enacted emergency legislation or guidance to facilitate telework (suspending normal requirements for modifying employment contracts) (European Labour Authority, 2024). By late 2020, some EU states (e.g. Belgium, France, Spain) made remote work the default rule during high-risk periods, and a "right to disconnect" and other protections for teleworkers began to gain traction (Remote workers and their right to disconnect: regulating telework in the EU) (European Labour Authority, 2024). Social dialogue was important – employers often had to negotiate arrangements (equipment provision, cost reimbursement, work-hour flexibility) with works councils or unions. In China, remote work was encouraged by authorities but not mandated except in specific local lockdowns. Early in the pandemic, China's Ministry of Human Resources and Social Security issued guidelines urging employers to arrange work-from-home for employees unable to return to the office (China Frontline June 2022 - Remote Working Series (I): Who Has the Right to Make the Decision on Remote Working?). These provisions were advisory, leaving the decision to employers, unless local governments imposed mandatory work-from-home orders during outbreaks (Dixon, 2022). In practice, many Chinese companies (especially in tech and services) adopted teleworking during citywide quarantines, supported by China's advanced digital infrastructure (Dixon, 2022). Once local restrictions lifted, employees could be required to return to the workplace at the employer's discretion.

4.4 Labor Relations Adjustments

Emergency laws and policies also addressed how employers manage their workforce during crises. In the U.S., new temporary laws were enacted to protect employees facing COVID-19. The Families First Coronavirus Response Act, for example, required most smaller and mid-sized employers to provide paid sick leave for COVID-related absences and job-protected family leave for child care during closures (Coronavirus Containment: A Handbook for Risk and Compliance Professionals) (Riskonnect, 2020). Many large corporations voluntarily expanded paid leave and benefits even beyond legal requirements as part of their response. Still, U.S. employers generally retained flexibility to furlough or lay off staff for economic reasons (subject to normal employment laws), leading to millions of furloughs in hard-hit industries. Unemployment insurance was massively expanded to cushion displaced workers. In the EU, strong employee protections and government support schemes shaped labor relations during the pandemic. Several countries temporarily banned or limited layoffs in the first phase of the crisis, and most implemented or broadened furlough programs (such as Germany's Kurzarbeit or France's activité partielle) to subsidize wages (Riskonnect, 2020). These schemes allowed companies to reduce working hours or suspend work while the state paid a portion of employees' salaries, preventing permanent job losses. Employment contracts were adjusted through collective agreements – for instance, unions and employers negotiated reduced hours, redeployment of staff to critical tasks, or deferral of salary increases, usually with government backing. Consequently, although EU businesses also saw layoffs, many jobs were preserved by these emergency measures. In China, the government took a very pro-employee stance: companies were explicitly prohibited from terminating employees during mandatory lockdown closures, and regulators urged firms to avoid layoffs after reopening by using wage cuts, rotating shifts, or retraining instead (Managing employment and labor disputes under the COVID-19 outbreak in China: regarding layoffs and termination of employment contracts). Employers in China were required to continue paying workers during business suspensions caused by COVID-19 – at least the normal wage for a defined period (usually one pay cycle) and no less than the local minimum wage for the remainder of the shutdown. Special job stability subsidies and social insurance reductions were offered to companies that kept workers on payroll (Ding, 2020). If operations could not resume fully, companies were encouraged to negotiate adjustments like part-time arrangements or use employees' annual leave rather than ending contracts. Overall, across jurisdictions, emergency labor measures aimed to balance protecting workers' livelihoods with giving employers some flexibility to weather the disruption. Each region's legal framework – from the U.S.'s mix of new federal laws and state rules, to the EU's extensive social safety nets, to China's government directives – set the baseline for corporate responses during the public health emergency.

4.5 Internal Corporate Emergency Response Mechanisms and Compliance Systems

Major corporations in the US, EU, and China activated or created internal crisis management structures to navigate the pandemic. Many companies had pre-existing **business continuity plans** or emergency teams, but those were tested as never before. In the United States, large firms often stood up cross-functional COVID-19 response teams reporting to top executives (Poppensieker, 2022). For example, tech companies in Silicon Valley convened emergency committees in early 2020 to decide on office closures, travel bans, and IT support for mass remote work. These teams typically included leaders from operations, HR, IT, communications, and legal departments, ensuring a 360-degree approach. Decision-making processes were streamlined – daily or weekly crisis meetings became routine – so that companies could respond quickly to fast-changing guidance from health authorities. Budgets were reallocated on the fly: firms set aside funds for purchasing safety supplies (masks, sanitizer, thermometers), upgrading remote-work infrastructure (VPNs, collaboration software), and enhancing healthcare benefits for employees. In the European Union, many corporations likewise established specialized **COVID-19 task forces**. A best-practice example was Volkswagen in Germany, which developed a comprehensive 100-point pandemic response plan and leveraged an early-warning system from its China operations to prepare its sites worldwide (How Volkswagen board member Hiltrud Werner finds resilience) (Poppensieker, 2022). Volkswagen formed a crisis team that included health and safety experts and used its global supplier network to obtain protective equipment for workers. European companies, especially those with unionized workforces, often integrated worker representatives into their crisis structures – for instance, forming joint management–employee committees to oversee workplace safety measures. In China, large enterprises (particularly state-owned enterprises) generally took a militarized approach by swiftly setting up **command-style emergency response structures**. China Unicom, a major state-owned telecom, established a top-down *pandemic prevention and control system* with a centralized leading group and five sub-teams focusing on coordination, medical safety, employee care, facility security, and legal support (PANDEMIC CONTROL: Persevering in our mission to combat the pandemic in fulfilment of our pivotal role) (China Unicom (Hong Kong) Limited, 2020). This structure enabled China Unicom to mobilize resources nationwide (e.g. distributing medical supplies across provinces) and to hold over 60 high-level meetings to issue 48 emergency directives internally during the crisis. In all regions, having a clear crisis management hierarchy and defined roles was critical (China Unicom (Hong Kong) Limited, 2020). Companies that invested in crisis planning and empowered their teams to act were generally more effective at keeping operations running and employees safe, as later studies confirmed.

The pandemic blurred the lines between operational decisions and compliance obligations, elevating the importance of in-house legal and compliance units. In normal times, corporate compliance focuses on areas like financial reporting, data protection, or anti-corruption – but during a public health emergency, *health and safety compliance* became paramount. In the U.S., legal departments had to interpret a flood of new regulations (from federal leave laws to local health orders) and advise leadership on compliance (Poppensieker, 2022). Many companies gave their **Chief Compliance Officer (CCO)** or General Counsel a seat at the crisis management table to ensure decisions (like closing a facility or instituting a vaccine requirement) were legally sound. However, in some firms the compliance function was initially sidelined by urgent business considerations, leading to missteps – for example, several retailers and manufacturers faced legal backlash for failing to promptly report workplace COVID outbreaks or to comply with OSHA safety guidelines. Over time, U.S. companies realized that empowering compliance officials to make calls on health measures (such as when to shut a site after an exposure) was crucial to avoid liability and protect employees. In the EU, compliance and legal teams played a key coordinating role given the complex regulatory environment. They had to reconcile corporate policies with country-specific rules on lockdowns, privacy (especially in handling employee health data under GDPR), and labor law (Eiffe, 2021). At Volkswagen, for instance, the board member in charge of integrity and legal (Hiltrud Werner) oversaw risk management and compliance during COVID-19, helping embed resilience into the company's strategy (How Volkswagen board member Hiltrud Werner finds resilience). Volkswagen's experience showed the value of having compliance integrated at the highest level – the company quickly implemented health protocols and even shared best practices with smaller suppliers, guided by its legal/risk teams (Eiffe, 2021). In China, compliance departments in state-owned enterprises had clear directives from the government to enforce. SOE compliance officers functioned as both internal watchdogs and liaisons with regulators. They ensured that government instructions (on reporting infections, screening employees, etc.) were strictly followed and had authority to halt operations that didn't meet official COVID-prevention standards. For example, China Unicom's emergency response included a **legal support group** as part of the leading team, indicating that compliance/legal personnel were empowered to review and guide the company's pandemic measures (PANDEMIC CONTROL: Persevering in our mission to combat the pandemic in fulfilment of our pivotal role) (China Unicom (Hong Kong) Limited, 2020). One notable aspect in China is that compliance was not optional – companies understood that failing to adhere to government pandemic controls could result in swift penalties or public criticism. In all regions, the crisis expanded the scope of corporate compliance: **workplace safety and public health rules became compliance issues**, and many legal departments had to become more agile (China Unicom (Hong Kong) Limited, 2020). The pandemic also taught companies to strengthen the independence of compliance units – giving them the clout to make tough calls (like suspending a project due to safety concerns) without being overruled by short-term profit motives.

Successful corporate emergency responses balanced the needs of key stakeholders – employees, suppliers, customers, and government regulators – through proactive communication and support. **Employees** were the central concern, as they directly felt the crisis. Companies that excelled prioritized employee safety and well-being: providing protective equipment, accommodating remote work, and offering flexible leave. In the U.S., numerous major employers introduced hazard pay or bonuses for frontline workers and expanded sick leave policies (even if not legally required) to encourage ill employees to stay home (JUST Capital, 2020). For example, Target and Darden Restaurants (Olive Garden's parent company) supplied masks and gloves to staff, reconfigured workplaces for distancing, and rolled out daily health screenings; Darden even made its emergency paid sick leave permanent for hourly workers (These Companies Are Prioritizing Health and Safety for Their Workers, Customers, and Communities). Equally important was **employee communication** – regular updates about the situation, new protocols, and resources (like mental health counseling) helped maintain trust. European companies often involved employee representatives or unions in stakeholder discussions; many set up employee hotlines or surveys to gauge workers' concerns. **Suppliers** and business partners formed another critical group (JUST Capital, 2020). The pandemic disrupted supply chains worldwide, so corporations had to work closely with suppliers to manage risks. Some U.S. and European multinationals proactively shared COVID-19 safety toolkits and best practices with their smaller suppliers to minimize downtime (How Volkswagen board member Hiltrud Werner finds resilience). Others provided financial support – for instance, by accelerating payments to suppliers or not enforcing contract penalties for delays, recognizing the shared challenge. Volkswagen's crisis team explicitly focused on helping suppliers recover quickly, knowing that "in a pandemic, you can't solve all your problems alone" (Eiffe, 2021). In China, large state-owned firms were sometimes tasked by the government to ensure stability of supply networks; this meant coordinating with upstream and downstream partners to resume production smoothly once lockdowns eased. **Customers** also required careful handling. Many businesses had to modify customer service and product delivery, whether by shifting to online sales, offering lenient cancellation/refund policies, or enhancing safety in physical stores (plexiglass shields, contactless payment). Maintaining service continuity was vital – for instance, China Unicom emphasized keeping its telecom networks running reliably as a "lifeline" for society while also forgiving service cuts for 300 million customers who fell behind on bills during the emergency period (PANDEMIC CONTROL: Persevering in our mission to combat the pandemic in fulfilment of our pivotal role). Being responsive to customers' needs and fears (e.g. airlines waiving change fees, retailers instituting special shopping hours for elderly customers) helped preserve goodwill. Finally, **government and regulators** were key stakeholders that corporations needed to closely engage. In the U.S., companies navigated a fragmented regulatory landscape by staying in frequent contact with state/local health departments and industry regulators. Essential businesses often had to file safety plans or self-certify compliance with health orders, and firms in heavily regulated sectors (like airlines, pharmaceuticals) coordinated with federal agencies on operating guidelines. Some industries also lobbied for clear and consistent rules – for example, manufacturers worked with OSHA and governors to define what counted as "essential" and what protocols to follow (Occupational Safety and Health Administration, 2020). In the EU, firms had to manage relationships with multiple layers of government (EU guidance, national laws, and sometimes regional rules). Many governments offered economic relief (grants, loans, furlough subsidies), and companies engaged with those programs and associated conditions (like pledges to avoid layoffs or to repurpose factories to produce medical supplies). Good corporate citizens cooperated fully with public health directives – as seen in Italy, where companies collaborated with authorities and unions to implement the nationally negotiated safety protocol across all workplaces (COVID-19 in the workplace: Employer's responsibility to ensure a safe workplace). In China, the government–corporate relationship during the pandemic was highly coordinated. Companies, especially SOEs, were expected to be extensions of the state's crisis response. Enterprises regularly reported their COVID-19 status to local officials, complied with any resource mobilization requests (such as donating equipment or deploying staff to support community testing), and followed *exact* instructions on when and how to reopen (Labor and employment in China – Guidance on business operations and workplace health and safety as the COVID-19 situation in China improves). In return, the government provided guidance and sometimes material support (e.g. allocating masks) to companies (China

Unicom (Hong Kong) Limited, 2020). Overall, across the U.S., EU, and China, an effective emergency response meant engaging all stakeholders with transparency and empathy. Companies learned that protecting employees and working constructively with regulators not only managed legal risk but also upheld their reputation – an invaluable asset when normal business eventually resumes.

5. Challenges and Root Causes in Corporate Emergency Response

The pandemic exposed gaps in existing laws and the often-vague nature of emergency regulations. In the U.S., the absence of a preexisting federal pandemic plan for workplaces meant companies initially had little actionable guidance – OSHA delayed issuing any COVID-specific standard, forcing businesses to interpret general safety duties on their own (Which States and Cities Have Adopted Comprehensive COVID-19 Worker Protections?). This lack of clear, consistent rules led to confusion (e.g. varying mask policies) and uneven safety practices (ADP, 2021). In the EU, while basic health and labor laws applied, many governments were improvising new decrees on closures, telework, or travel bans. Frequently these rules came on short notice and were couched as recommendations rather than explicit mandates, leaving companies unsure how to comply (ADP, 2021). China had emergency response laws on the books, but since no national emergency was formally declared, authorities relied on broad disease control statutes and ad-hoc local directives. Some Chinese companies struggled with the *breadth* of obligations (dozens of government notices with dense requirements) and areas where law was silent – for example, how to handle contractual non-performance due to lockdown (force majeure declarations became a common but legally grey practice) (Davis, 2020). All regions found that legislation had not fully anticipated a crisis of this scale, forcing rapid legal adaptations that sometimes lacked detail and certainty.

Another challenge was the inconsistent enforcement of rules and divergent regional policies, which created uncertainty for corporations operating across multiple jurisdictions. In the U.S., a patchwork emerged: some states (and even cities) aggressively enforced COVID-19 workplace safety (issuing fines for violations), while others took a lighter touch (Davis, 2020). For instance, states like California and Virginia implemented strict emergency standards for employers, whereas others only offered voluntary guidance (Which States and Cities Have Adopted Comprehensive COVID-19 Worker Protections?). As a result, a company with sites in different states had to juggle conflicting requirements (Davis, 2020). In the EU, each member nation set its own timeline for lockdowns and reopenings, and specific measures (like whether masks were required in offices or whether restaurants could open) varied widely. These national disparities – and even regional ones, as seen when virus hotspots like Northern Italy had stricter rules than other areas – complicated compliance for multinational companies (Spencer Stuart, 2022). Corporations had to customize their emergency response by country, which was resource-intensive and sometimes led to perceptions of unfairness among employees (why is our French plant closed while our German plant is open?). In China, enforcement was generally strict nationwide, but differences still arose between localities. Some cities imposed longer quarantines or more frequent testing than others, and enforcement zeal could depend on local leadership. Companies in China had to stay attuned to local *"fine print"* – a factory in Wuhan faced a very different regulatory environment than an office in Beijing (Zhou & Goh, 2023). Additionally, *supply chain interdependencies* meant that a lockdown in one province could disrupt factories in another that was technically open, a nuance initial regulations didn't always account for. The inconsistency and regional fragmentation of rules, both within countries and across them, left corporations often erring on the side of caution and in constant dialogue with authorities to clarify what was expected.

Within many companies, the pandemic revealed weaknesses in internal compliance structures and blurred lines of decision-making. Prior to COVID-19, few firms had a dedicated pandemic plan or an emergency response team practiced in health crises. This meant that when the outbreak hit, some organizations stumbled – initial responses were ad hoc, and roles were unclear (e.g. should HR, operations, or security lead the COVID response?). Companies that lacked a single accountable leader or committee for crisis management saw delays and internal disagreements (European Agency for Safety and Health at Work, 2020). One common issue was the unclear division of responsibility between local managers and corporate headquarters. For example, in a multinational, a plant manager in Europe might hesitate to shut down production without approval from U.S. headquarters, even if local conditions warranted it – costing precious time. Conversely, headquarters sometimes issued broad directives that didn't fit on-the-ground realities, causing compliance headaches for local teams. Another weakness was insufficient **business continuity planning** for a prolonged emergency (European Agency for Safety and Health at Work, 2020). Many firms' contingency plans focused on IT outages or natural disasters, not a global health event; they had not identified which business functions were truly critical. Volkswagen admitted that at the pandemic's start, it had not documented which operations were mission-critical and therefore struggled initially to prioritize resources for remote access (How Volkswagen board member Hiltrud Werner finds resilience). This is symptomatic of a broader structural challenge: internal risk management systems weren't fully integrated with compliance and HR systems. As a result, corporate responses sometimes lagged or were inconsistent until companies restructured their internal teams. Lastly, some compliance officers lacked the authority to enforce tough measures (like halting a project or spending unbudgeted funds on safety) in the face of pushback from business units

(Zhou & Goh, 2023). Organizations learned the hard way that internal **chains of command for emergencies** must be established in advance, and that compliance/risk management needs a stronger voice to guide the company through uncharted waters.

The impact of the pandemic – and companies' ability to respond – was heavily influenced by structural factors like industry sector and organizational type (multinational vs. state-owned, etc.) (U.S. Bureau of Labor Statistics, 2021). Different industries faced **unique risks**: for instance, airlines, hotels, and restaurants saw demand collapse and had to almost completely halt operations (a catastrophic scenario no simple compliance checklist could resolve), whereas tech firms or financial services rapidly shifted to remote work and remained productive. Manufacturing and logistics companies confronted the challenge of protecting factory and warehouse workers who must be on-site – requiring costly modifications and exposing firms to outbreaks that could suspend operations (Puranam & Srikanth, 2020). These industry-specific pressures meant that "one-size-fits-all" guidance often fell short. Companies in high-risk industries had to innovate on the fly (like retailers setting up curbside pickup or factories retooling to produce PPE) without much precedent. Moreover, **multinational corporations vs. domestic/state-owned enterprises** experienced the crisis differently. Multinationals had the advantage of diversified operations – early lessons from one region (e.g. Asia) could inform responses elsewhere – and often had more resources to devote to crisis management (dedicated teams, advanced IT for telework, etc.). However, they also faced the complexity of coordinating across jurisdictions and aligning with many regulators. State-owned or domestic firms, on the other hand, were often closely guided by their governments. In China, SOEs like China Unicom were expected to lead by example and had political support to mobilize massive resources, but they also shouldered extra responsibilities (such as providing public services or enforcing government mandates among their staff) that private multinationals did not (PANDEMIC CONTROL: Persevering in our mission to combat the pandemic in fulfilment of our pivotal role) (Li & Wang, 2021). Western companies that encourage employee participation needed to manage workforce anxieties and input (sometimes negotiating changes with unions), whereas some Asian companies with top-down cultures could impose measures swiftly but risked lower buy-in if employees weren't consulted (Li & Wang, 2021). Finally, the **scale of a corporation** was a double-edged sword – large corporations had more buffer and expertise to handle crises, yet even they struggled with agility, whereas smaller firms could be nimble but often lacked robust compliance systems and had thinner margins for error. All these structural factors contributed to the challenges in emergency response, underscoring that preparedness and resilience need to be tailored to a company's specific context.

6. Legislative Recommendations (Laws and Flexibility)

Introduce or amend laws to explicitly require corporate emergency preparedness. For instance, regulators can mandate that companies maintain **business continuity plans** and risk mitigation strategies to handle disasters (Business Continuity Planning (BCP)). In practice, financial authorities already require firms to have written continuity plans for significant disruptions. Similar legal requirements across industries would ensure all companies – especially critical SOEs – have up-to-date emergency response plans and defined leadership roles during crises

Enhance the operability of corporate laws so businesses can take rapid, **legally sound actions** during a crisis. This includes allowing virtual or hybrid board and shareholder meetings, remote voting, and expedited decision procedures when normal operations are impeded. The COVID-19 pandemic exposed shortcomings in legal frameworks that didn't permit virtual meetings, prompting over 80% of countries worldwide to adopt emergency measures for online meetings. Making such flexibility permanent (e.g. legalizing fully virtual annual general meetings and remote board oversight) will enable timely decisions under lockdowns or travel restrictions (World Bank, 2020).

Legislate a **unified and transparent mechanism** for regulatory enforcement during national emergencies to minimize conflicting local rules (UK Parliament, 2004). This could mean requiring agencies at different government levels to coordinate and issue consistent guidelines to companies. For example, China's recent push for a *"national unified market"* is designed to dismantle local protectionism and regulatory fragmentation across provinces. A similar principle in emergency law would ensure that an MNC or SOE receives one clear set of directives countrywide, rather than navigating inconsistent regional orders. Clear legal mandates for information-sharing (such as a central emergency notification system) would further streamline how companies get critical updates.

6.1 Regulatory and Enforcement Recommendations

Regulators should develop detailed **sector-specific playbooks** that outline how businesses can comply and operate during different emergency scenarios. These guidelines (backed by administrative directives) would give companies clear operational processes to follow. For example, banking regulators have jointly published pandemic planning guidance urging financial institutions to include preventive programs, scalable response strategies, and testing routines in their continuity plans (Interagency Statement on Pandemic Planning). Similar guidance can be tailored to other industries – e.g. health agencies for manufacturing or labor departments for retail – so that each sector knows in advance the compliance steps needed for health crises, cyberattacks, natural disasters, and more (Temple University Beasley School of Law, 2020).

Create a **coordination platform** where multiple regulatory bodies collaborate and share information during emergencies. This could be an inter-agency task force or communication portal that provides unified updates to companies. The goal is to ensure businesses receive timely, consistent regulatory information (e.g. updates on new safety protocols, reporting requirements, or government relief measures) from a single source. A good precedent comes from financial regulation: U.S. agencies formed the FFIEC, which during the pandemic issued a unified interagency statement on pandemic preparedness (Federal Financial Institutions Examination Council, 2020). That joint approach meant banks heard one voice on expectations. Extending such coordination to all relevant regulators – health, safety, environment, securities, etc. – would reduce confusion and help companies comply more quickly.

Regulators should work with corporate compliance departments to intensify oversight during crises, while also **rewarding strong compliance** (Comply, 2020). This means encouraging companies to empower their compliance officers to monitor emergency actions and swiftly address new risks (Compliance Considerations during the COVID-19 Crisis). Agencies can provide incentives or preferential policies for firms that demonstrate exemplary compliance under duress. For example, governments might condition emergency relief funds on the company's adherence to responsible business practices, or offer fast-track approvals and public recognition to businesses with robust crisis compliance systems (COVID-19 and Responsible Business Conduct). Such measures motivate companies to invest in compliance readiness (Temple University Beasley School of Law, 2020). Additionally, regulators can consider leniency or flexibility for firms that self-report issues encountered in an emergency, provided they took good-faith steps to stay compliant. Overall, pairing stricter oversight with positive incentives will build a culture of compliance that endures through crises.

6.2 Corporate Governance and Compliance Optimization

Companies should formalize governance structures for emergency management (Federal Emergency Management Agency, 2005). This could involve establishing a dedicated **"Emergency and Compliance Committee"** at the board or senior executive level, or assigning clear crisis-management duties to an existing risk committee. The designated group or officer would oversee emergency preparedness, monitor crisis response, and ensure all actions stay within legal and ethical bounds. As a best practice, some leading firms have such mechanisms in place – for example, LG Energy Solution activates a corporate Emergency Committee, led by top executives, whenever a crisis strikes, to coordinate the response and prioritize the safety of employees and the community (Ensuring Business Resilience) (European Risk Management Council, 2024). By having a similar high-level committee, both MNCs and SOEs can react faster and with greater accountability, since roles and decision-making authority in emergencies are pre-defined.

Improving preparedness means treating emergency readiness as part of day-to-day management. Companies should regularly conduct **risk identification exercises and emergency drills** (simulations of scenarios like pandemics, supply chain disruptions, or cyber-attacks) to expose weaknesses and train staff in crisis procedures (Ossisto, 2025). These drills should involve cross-functional teams and ideally the board's emergency committee, ensuring that from the factory floor to the C-suite, everyone knows their role in a crisis. After-action reviews are crucial: any gaps found should lead to updated plans and training. A case in point is LG Energy Solution, which not only runs mock crisis training sessions that simulate their Emergency Committee's decision-making, but also updates its crisis response manuals and conducts "horizontal" learning across departments to continuously improve readiness (Ensuring Business Resilience) (Ossisto, 2025). By embedding such practices, organizations become much more adept at handling real emergencies – the response becomes almost second nature.

Digital transformation is a key enabler of resilient operations and compliance monitoring during emergencies. Companies should invest in technology that supports remote work, real-time decision-making, and automated compliance checks. Secure teleconferencing and collaboration platforms allow management and boards of directors to meet virtually and keep the business running even under lockdowns (Nowell et al., 2017). Real-time dashboards and data analytics can help leaders monitor rapidly changing conditions – for example, tracking employee health status, supply chain disruptions, or regulatory announcements in different regions. During COVID-19, many corporations accelerated the adoption of such tools: companies enhanced digital connectivity across their supply chains and implemented hundreds of process adjustments to reduce risk and maintain critical operations (Amazon, for one, reported **150+ process updates** to meet priority needs safely during the pandemic) (Business continuity in the COVID-19 emergency: A framework of actions undertaken by world-leading companies). Likewise, compliance software can be used to remotely audit and flag issues (e.g. ensuring that emergency health protocols or data security standards are followed by staff at home). Embracing these technologies not only helps in the middle of a crisis but also improves overall efficiency and oversight in normal times.

7. Conclusion

The COVID-19 pandemic highlighted the critical need for stronger corporate emergency legal frameworks, regulatory coordination, and governance mechanisms. While governments set mandates, corporate preparedness and compliance structures determined the effectiveness of crisis responses. The comparative analysis of the U.S., EU, and China revealed key differences in legal approaches, enforcement, and corporate strategies, emphasizing the importance of clear, flexible regulations and proactive corporate governance.

To improve resilience, laws must mandate corporate continuity plans, streamline regulatory enforcement, and provide clearer guidelines for businesses. Companies should institutionalize risk assessments, establish dedicated emergency committees, and leverage digital tools for compliance and crisis management. Multinational corporations must harmonize emergency frameworks across jurisdictions, while SOEs must balance national policy directives with operational efficiency. Strengthening compliance oversight and stakeholder engagement will further enhance corporate crisis readiness.

Finally, international cooperation is essential. Businesses should align with global standards, such as those set by WHO and ILO, to ensure a coordinated response to future crises. By integrating legal reforms, governance improvements, and global best practices, both governments and businesses can build a more resilient corporate sector capable of withstanding future emergencies.

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References

ADP. (2021, January 5). *COVID-19 compliance: Exploring five challenges for employers in 2021*. https://www.adp.com/spark/articles/2021/01/covid-19-compliance-exploring-five-challenges-for-employers-in-2021.aspx

Puranam, P., & Srikanth, K. (2020). The impact of the Covid-19 pandemic on firms' organizational designs. *Journal of Organization Design*, 9(1), 1–5. https://doi.org/10.1186/s41469-020-00085-7:contentReference

AlertMedia. (2025). *From Chaos to Control: How ISO 22320 Strengthens Emergency & Incident Response*. Retrieved April 13, 2025, from https://www.alertmedia.com/blog/iso-22320-emergency-management/

Allinger, B., & Adam, G. (2022, June 16). *COVID-19 in the workplace: Employer's responsibility to ensure a safe workplace*. European Foundation for the Improvement of Living and Working Conditions. https://www.eurofound.europa.eu/en/resources/article/2022/covid-19-workplace-employers-responsibility-ensure-safe-workplace

Berkowitz, D. (2021, June 9). *Which states and cities have adopted comprehensive COVID-19 worker protections?* National Employment Law Project. https://www.nelp.org/which-states-cities-have-adopted-comprehensive-covid-19-worker-protections/:contentReference

Bick, A., Blandin, A., & Mertens, K. (2022). *Working remotely and the supply-side impact of COVID-19*. Proceedings of the National Academy of Sciences, 119(52), e2200580119. https://doi.org/10.1073/pnas.2200580119

Brynjolfsson, E., Horton, J. J., Ozimek, A., Rock, D., Sharma, G., & TuYe, H.-Y. (2024). The rise in remote work since the pandemic and its impact on productivity. *Beyond the Numbers: U.S. Bureau of Labor Statistics*, 13(3). https://www.bls.gov/opub/btn/volume-13/remote-work-productivity.htm

China Unicom (Hong Kong) Limited. (2020). *Corporate social responsibility report 2020*. https://www.chinaunicom.com.hk/en/esg/csr2020/csr2020_04.pdf

Choi, S., & Choi, H. (2024). Labor market effects of global supply chain disruptions. Journal of Economic Dynamics and Control, 157, 104843. https://doi.org/10.1016/j.jedc.2024.104843

Comply. (2020, March 23). *Compliance considerations during a global pandemic*. https://www.comply.com/resource/compliance-considerations-during-pandemic/

Cooper-Johnson, T. (2024). *Effective Crisis Management*. ResearchGate. Retrieved from https://www.researchgate.net/publication/285064922_Effective_Crisis_Management

Davis, T. E. (2020, May 14). *COVID-19, compliance, and information technology*. Temple University Beasley School of Law, 10-Q: Business Law Bulletin. https://www2.law.temple.edu/10q/covid-19-compliance-and-information-technology/

Ding, W. (2020). *COVID-19 and labour law: China*. *Italian Labour Law e-Journal*, Special Issue 1, Vol. 13. https://doi.org/10.6092/issn.1561-8048/10786

Dixon, A. (2022, June 28). *China Frontline June 2022 – Remote Working Series (I): Who has the right to make the decision on remote working?* Bird & Bird. https://www.twobirds.com/en/insights/2022/china/china-frontline-june-2022:contentReference

Duston, N. A. (2020, March 18). *Can the government really shut down my business and make me stay home? Questions answered relating to declarations of emergency due to coronavirus*. Norris McLaughlin, P.A. https://norrismclaughlin.com/blb/business-operations/can-the-government-really-shut-down-my-business-and-make-me-stay-home-questions-answered-relating-to-declarations-of-emergency-due-to-coronavirus-covid-19/

Eiffe, F. F. (2021, December 9). *Business not as usual: How EU companies adapted to the COVID-19 pandemic*. European Foundation for the Improvement of Living and Working Conditions. https://www.eurofound.europa.eu/en/publications/2021/business-not-usual-how-eu-companies-adapted-covid-19-pandemic

European Agency for Safety and Health at Work. (2020). *COVID-19: Guidance for the workplace*. https://oshwiki.osha.europa.eu/en/themes/covid-19-guidance-workplace

European Labour Authority. (2024, May 17). *Remote workers and their right to disconnect: Regulating telework in the EU*. EURES.

https://eures.europa.eu/remote-workers-and-their-right-disconnect-regulating-telework-eu-2024-05-17_en

European Risk Management Council. (2024, May 2). Crisis management: The last line of defence. *Financial Times*. https://www.ft.com/content/fd49e7f5-2240-4e03-adad-b9480986fd3e

Federal Emergency Management Agency. (2005). *Emergency management guide for business and industry*. https://www.fema.gov/pdf/library/bizindst.pdf

Federal Emergency Management Agency. (2020). *Supply chain resilience guide*. U.S. Department of Homeland Security. https://www.fema.gov/sites/default/files/2020-07/supply-chain-resilience-guide.pdf

Federal Financial Institutions Examination Council. (2020, March 6). *Interagency statement on pandemic planning*. https://www.fdic.gov/sites/default/files/2024-03/fil20014a.pdf

International Organization for Standardization. (2018). ISO 22320:2018 Security and resilience—Emergency management—Guidelines for incident management. ISO.

JUST Capital. (2020, June 18). *These companies are prioritizing health and safety for their workers, customers, and communities*. https://justcapital.com/reports/these-companies-are-prioritizing-health-and-safety-for-their-workers/

Kaufman & Canoles, P.C. (2020). The corporate emergency response plan: A smart strategy. *Kaufman & Canoles Law Firm*. https://www.kaufcan.com/news/articles/the-corporate-emergency-response-plan-a-smart-strategy/
Boyd, A. (2020). Emergency preparedness for employers: Legal obligations and responsibilities. *Amber Boyd Law*. https://www.amberboydlaw.com/emergency-preparedness-for-employers-legal-obligations-and-responsibilities

Li, L., & Wang, Y. (2021). Did state-owned enterprises do better during COVID-19? Evidence from a survey of company executives in China. *China Economic Review*, 67, 101607. https://doi.org/10.1016/j.chieco.2021.101607

Mitroff, I. I., & Anagnos, G. (2000). *Managing Crises Before They Happen: What Every Executive and Manager Needs to Know About Crisis Management*. AMACOM.

National Governors Association. (2020, March 24). *Overview of state actions on business closure and personal movement restrictions in response to COVID-19*. https://www.nga.org/publications/overview-state-actions-business-closure-personal-movement/

Nowell, B., Steelman, T., Velez, A.-L. K., & Yang, Z. (2017). The structure of effective governance of disaster response networks: Insights from the field. *Public Administration Review*, 77(4), 636–647. https://doi.org/10.1111/puar.12658

Occupational Safety and Health Administration. (2020). *Guidance on Preparing Workplaces for COVID-19*. U.S. Department of Labor. https://www.osha.gov/sites/default/files/publications/osha3990.pdf:contentReference

Ossisto. (2025). Crisis management tools every business needs in 2025. https://ossisto.com/blog/crisis-management-tools/

Poppensieker, T. (2022, April 15). *How Volkswagen board member Hiltrud Werner finds resilience*. McKinsey & Company. https://www.mckinsey.com/capabilities/risk-and-resilience/our-insights/how-volkswagen-board-member-hiltrud-werner-finds-resilience

Riskonnect. (2020). Coronavirus containment: A handbook for risk and compliance professionals. https://riskonnect.com/covid-19/coronavirus-containment-a-handbook-for-risk-and-compliance-professionals/

Spencer Stuart. (2022, September 27). *Empowering corporate compliance functions in a post-pandemic environment*. Harvard Law School Forum on Corporate Governance. https://corpgov.law.harvard.edu/2022/09/27/empowering-corporate-compliance-functions-in-a-post-pandemic-environment/

Temple University Beasley School of Law. (2020, May 14). *Corporate compliance measures during the COVID-19 crisis*. https://www2.law.temple.edu/10q/corporate-compliance-measures-during-the-covid-19-crisis/

U.S. Bureau of Labor Statistics. (2021, March). Impact of the coronavirus pandemic on establishments and employees by industry.

https://www.bls.gov/spotlight/2021/impact-of-the-coronavirus-pandemic-on-businesses-and-employees-by-industry/

Yang, K. (2020, March 20). *Managing employment and labor disputes under the COVID-19 outbreak in China: Regarding layoffs and termination of employment contracts*. Reed Smith LLP. https://www.reedsmith.com/en/perspectives/2020/03/managing-employment-and-labor-disputes-under-the-covid-19-outbreak

Yang, K. (2020, May 8). *Labor and employment in China – Guidance on business operations and workplace health and safety as the COVID-19 situation in China improves*. Reed Smith LLP. https://www.reedsmith.com/en/perspectives/2020/05/labor-and-employment-in-china--guidance-on-business-operations-and

Zhou, T., & Goh, Y. M. (2023). The impact of COVID-19 pandemic on construction safety in China and the United States. *International Journal of Environmental Research and Public Health, 20*(1), 137. https://doi.org/10.3390/ijerph20010137