

## Lessons from Implementation of Business Continuity Plan in Singapore Construction Companies during COVID-19

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**Abstract:** A business continuity plan (BCP) is a set of comprehensive measures required for a company to operate smoothly amid disruptions. The COVID-19 pandemic highlighted the importance of having a BCP to mitigate major disruptions. However, there is limited research on BCP adoption in the construction industry. Thus, this paper seeks to derive lessons from implementing BCP in the Singapore construction industry during the COVID-19 pandemic. Firstly, we investigated the BCP adoption rate in the construction industry and identified the common BCP measures. Next, we assessed the effectiveness of the existing BCP measures, identified the reasons for non-adoption, and suggested ways to improve the adoption rates in the industry. Finally, we compared Singapore's BCP measures and guidelines against that of other countries. The data collection includes a survey questionnaire, interviews, and an online review of COVID-19 safety management guidelines. The sample size is 51 survey entries and eight interviewees. The study found that the BCPs during the COVID-19 pandemic focus on preventing the spread of COVID-19 in workplaces and allowing business operations to recover smoothly. However, companies are reluctant to expand their BCPs to include other uncertainties, risks, and future pandemics. In addition, many respondents suggested that the lack of knowledge and maintenance costs prevented them from expanding their BCP. Finally, the paper suggested recommendations to improve the BCP adoption rates.

**Keywords:** COVID-19, business continuity plan, BCP, construction, circuit breaker

**Extended Abstract:** A business continuity plan (BCP) is a set of comprehensive measures required for a company to operate smoothly amid disruptions. It is defined as the “documented information that guides an organisation to respond to a disruption and resume, recover and restore the delivery of products and services consistent with its business continuity objective” (*ISO 22301:2019 Security and resilience — Business continuity management systems — Requirements*). In 2020, the onset of the COVID-19 pandemic led to an unprecedented change in the way we live and work (International Labour Organization (ILO), 2020). The COVID-19 pandemic highlighted the importance of having a BCP to mitigate major disruptions. Amid such uncertainties, having a comprehensive plan with measures detailing ways to mitigate potential disruptions has been more critical than ever. However, there is limited research on BCP adoption in the construction industry despite the continuing efforts from the different governments to encourage businesses to practice business continuity management (BCM) (Low, Liu, & Sio, 2010).

Thus, this paper seeks to derive lessons from implementing BCP in the Singapore construction industry during the COVID-19 pandemic. Firstly, we investigated the BCP adoption rate in the construction industry and identified the common BCP measures. Next, we assessed the effectiveness of the existing BCP measures, identified the reasons for non-adoption, and suggested ways to improve the adoption rates in the industry. Finally, we compared Singapore's BCP measures and guidelines against that of other countries. The literature review reveals a lack of research conducted on BCP in construction companies internationally. Much of the existing literature focused on crisis and disaster management, which are related to BCP but substantially different (Smith, 2003). Therefore, this paper will discuss BCP measures and guidelines released by governments in some countries and discuss the role of governments in promoting BCP during COVID-19. This review indicates that the guidelines published by the Victoria state of Australia (Victorian Building Authority, 2020) are more comprehensive compared to the United Kingdom (UK) (Construction Leadership Council, 2022) and the United States (US) guidelines (Occupational Safety and Health Administration, 2020).

This study adopted a mixed method approach which consisted of a survey questionnaire and interviews to understand their views on BCP in the construction industry. The sample size is 51 survey entries and eight interviewees. The questionnaire provided an overview of the BCP measures taken by the construction industry during COVID-19. Similarities and differences in the BCP measures adopted by different companies were identified based. Challenges in the implementation of the BCP

measures were also determined. The interviews provided richer details on how different companies customised their BCP and the reasons behind them.

The study found that the BCPs during the COVID-19 pandemic focus on preventing the spread of COVID-19 in workplaces and allowing business operations to recover smoothly. However, companies are reluctant to expand their BCPs to include other uncertainties, risks, and future pandemics. In addition, many respondents suggested that the lack of knowledge and maintenance costs prevented them from expanding their BCP. Based on the findings, we adapted the five-tier Hearts and Minds model on safety culture to classify companies based on their business continuity approaches during the COVID-19 pandemic (Energy Institute, 2022). It was revealed that most companies belonged to the last three tiers (i.e., calculative, reactive, and pathological) despite the pandemic, signalling that most companies are not taking a proactive approach to manage pandemic-related business disruptions.

Finally, the paper suggested recommendations to improve the BCP adoption rates. This includes educating the industry professionals on the importance of BCP, embedding BCP requirements in the regulatory framework for the construction industry, providing incentives for companies to be ISO 22301 certified, and developing construction specific BCP guidelines to cater to the unique nature of the construction industry.

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