A Case Study of a Volunteer Team on Coordinating Medical Supply Donation in the Battle against COVID-19 in Hubei

Xiaoping Tong

Abstract

There was great shortage of medical goods and materials for fighting COVID-19 in Hubei hospitals and supporting units in the earlier stage of the COVID-19 epidemic. Nongovernmental volunteers and organizations played important roles in helping bridging the gap of need for the medical resources before the governments took over the essential supplies. The central government emphasized bettering the structure of input of medical resources for controlling the epidemic at a later point. However, how the volunteers and volunteer organizations functioned during the gap window and how effective their were were remains unclear for policy makers and the public. The present study seeks to address this problem by conducting a case study of a volunteer organization which mainly coordinated donations of medical goods and materials for Hubei hospitals online and made substantial contribution. Findings from the case reveal that the core mechanism that supported the successful operation of this team was its fit with the six principles of a market-oriented ecosystem. The study provides implications for the country to further strengthen the reservation of strategic emergence goods and materials as well as their supply chains. The case also shares experiences for concurrent or future similar teams that conduct volunteering coordination in China or other countries and regions.

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Crisis Management for SMEs in MACAU S.A.R. :

Survival, Resilience and Renewal Strategies during the COVID-19 Outbreak

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Abstract

This paper examines how SMEs in Macau respond to the recent COVID-19 crisis. We conducted in-depth semi-structured interviews with four local SMEs with different backgrounds. We find that SMEs, especially new firms set up by young entrepreneurs, react swiftly and effectively to the crisis. In contrast, firms with a long history, extensive previous crisis experience, and in more regulated industries often have structured crisis planning and strategies. SMEs are found to be more vulnerable to demand constraints (loss of customers/market) than financial constraints (difficulty of obtaining financial resources). Small firms have extensively used technology for communication during the outbreak. We observe that most firms have resilience and

recovery strategies to some extent, using product diversification, exploring new market sectors, and increasing training in crisis management. Some SMEs hesitate to invest hugely in learning, but we recommend them to search for learning tools that are informal, innovative, effective, and inexpensive. SMEs are overall satisfied with the existing government policies, especially on offering consumer e-vouchers, offering a special tax deduction, and granting a particular loan to SMEs. Our study contributes to the current literature on the crisis management by providing empirical evidence from Macau, an emerging market where over 98% of businesses are SMEs, and with an economy centered on the gaming and tourism industries.

Keywords: Crisis Management; Resilience Strategies; SMEs; COVID-19

Trends in Transmissibility of 2019 Novel Coronavirus-infected Pneumonia in Wuhan and 29 Provinces in China

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Abstract

Background The 2019 novel coronavirus infected pneumonia (COVID-19) represents a significant public health threat. The COVID-19 emerged in December 2019 in Wuhan, China and rapidly spread to other regions and countries. The variation in transmission patterns and disease spread in regard to time or among different locations, partially reflecting the public health intervention effects, remains to be quantified. As most transmissibility-related epidemic parameters are unknown, we sought, with minimal assumptions, to estimate real-time transmissibility and forecast new cases using dynamic modelling.

Methods Using the cases reported from the National Health Commission of China and transportation data, including the total number of travelling hours through railway, airplane, and car outbound from Wuhan, we have built a time-series model to estimate real-time underlying transmission rates

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of newly generated cases sequentially from January 20, 2020 to Feb 13, 2020 in Wuhan, Hubei province and other 28 provinces in China. We quantified the instantaneous transmission rate and relative reproduction number (R_t) of COVID-19, and evaluated whether public health intervention affected the case transmissibility in each province. Based on the current estimates, we have predicted the trend of disease spread with a high level of certainty.

Findings We estimated that R_t declined from the range of 4 to 5 towards 1 and remained below unity, while there was an initial growth followed by a decline in a shorter period in Hubei and other provinces. The ratio of transmission rates decreased dramatically from January 23 to 27 likely due to the rigorous public health intervention implemented by the government beginning on January 23, 2020. The mean duration of the infectious period was 6 to 9 days. We have predicted the trend of infection sizes which became stable in provinces around February 19 to 24, 2020, and the date of containment would be one-week later in Wuhan.

Conclusions Public health interventions implemented at both the social and personal levels are effective in preventing outbreaks of COVID-19 in Wuhan and other provinces. Model prediction results suggested that COVID-19 will be contained around the end of February 2020 in China.

Keywords: COVID-19, transmissibility, dynamic reproduction number R, statistical modelling, pneumonia outbreak

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