

# An analysis of China's strategy in combating the coronavirus pandemic with the 3H framework

## Abstract

**Purpose** – This paper attempts to theorise about China's strategy in combating the coronavirus pandemic with an embryonic framework - 3H (Heart-Head-Hand) framework. By adopting a descriptive approach, the paper introduces the case of coronavirus outbreak in China and how the public health administration coped with it. The 3H framework has been applied to analyse China's strategy, and the framework's assumptions are initially tested.

**Design/methodology/approach** – The pandemic case is created based on credible reports, press releases from different respected sources, World Health Organization (WHO) statistics, interview transcripts and broadcasting stations' video clippings. Interpretive analysis with pragmatism approach has been conducted in analysing the data and information collected. Triangulation, wherever possible, has been done to validate the data and information.

**Findings** – As an exploratory study, its findings show that 3H framework distinguishes the effectiveness of a country's strategy and practice for combating the pandemic. Countries, which failed to observe the assumed principles of 3H domains tend to have much more infected cases and deaths.

**Originality/value** – The 3H framework conceptualised a holistic management approach and its assumptions have been initially tested with this pandemic case. The framework shows its predictability value for a country's pandemic management effectiveness.

**Keywords** 3H framework, Holistic management, Chinese public health administration, Pandemic, Novel coronavirus, COVID-19, China

**Paper type** Research paper

## Introduction

The coronavirus pandemic has undoubtedly been one of the most terrifying and devastating diseases in modern history. Every country needs to be vigilant against its attack – the process is like a comprehensive examination of a country's leadership and competence in public health administration or as what Fukuyama (2020) described – a brutal political stress test. Arguably, it may not be a fair examination setting for all countries because while some were assaulted by surprise with little knowledge about the virus, other countries were alerted months earlier about the virus alarming threats to human life thus ought to have better prepared for the attack. Surprisingly, those sat the examination earlier, such as China, Taiwan and New Zealand, performed far better than those sat the examination months later, such as the US and the UK. This paper attempts to identify key success and failure factors of countries in combating COVID-19 using a novel 3H framework (Yu, 2020). With this background, the paper begins with China's response to the mysterious virus attack.



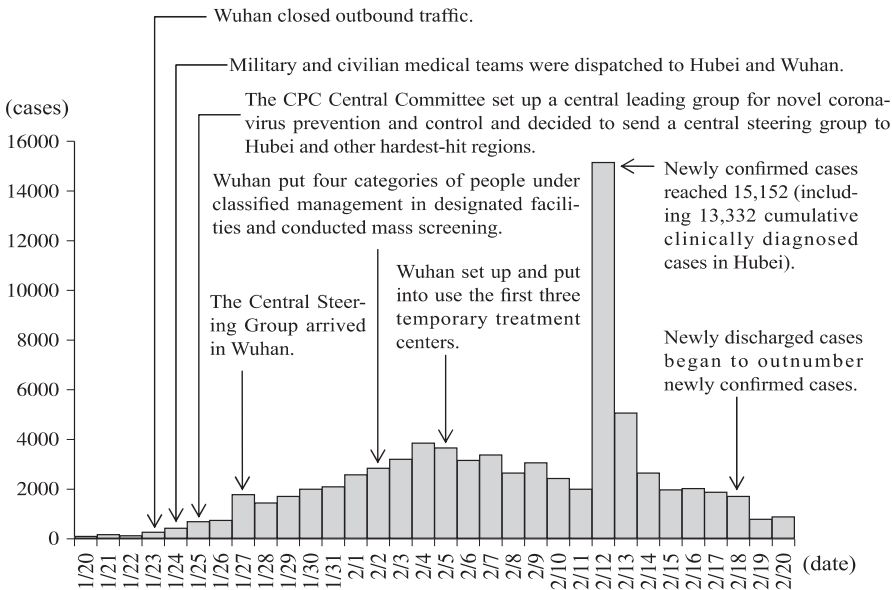
**The early outbreak**

In late December 2019, several patients with mysterious respiratory disease were treated at Jinyintan Hospital in Wuhan. Rumours circulated in the city that people have caught a highly infectious disease at the Huanan Seafood Market (Market), which is a live animal and seafood market in Jiangnan District, Wuhan. Little information about the disease was officially announced despite a burgeoning number of patients with SARS-like symptoms flocked into hospitals for consultations and treatments. The Market was closed on 1 January 2020 when the city government of Wuhan admitted that there was a new coronavirus from animal transmitted to human cases found in the Market.

On 9 January 2020, the National Health Commission (NHC) team released information on the pathogen of the viral pneumonia of unknown cause and made a preliminary judgement that a novel coronavirus was the cause. The NHC informed the World Health Organization (WHO) accordingly and WHO officially announced to its members and to the world that a cluster of pneumonia cases was identified in Wuhan. On 19 January, NHC diagnosed that the coronavirus was spreading among humans.

**The lockdown**

In mid-January 2020, Wuhan reported daily infected cases between 2000 and 3000 (Figure 1). The infected cases were mostly occurring in families. As Wuhan was recognised as the epicentre, NHC and Chinese Center for Disease Control and Prevention (CDC) immediately alerted the Party leaders. President Xi Jinping promptly spearheaded the Central Leadership Group for Epidemic Response to develop a comprehensive strategy and execution plan against the coronavirus epidemic on all fronts. Premier Li Keqiang flew to Wuhan to inspect and coordinate draconian prevention and control measures. On 23 January 2020, a day before the Chinese New Year Eve, municipal authority announced the complete lockdown of Wuhan to curb the spread of the virus out of the city. Figure 1 depicts the infected cases hiking between 20 January and 20 February 2020.



**Figure 1.**  
Daily Figure for Newly  
Confirmed Cases in  
China (20 January – 20  
February 2020)

Source: The State Council Information Office of the People's Republic of China (2020)

Figure 2 shows the corresponding adjustment was made on 13 February 2020, as 242 deaths are the accrued number, which were reclassified as COVID-19 patients. That means the outbreak in China, mainly in Wuhan, could have caused severe casualties in early January and only subsided in late February.

**The recovery**

According to the WHO (2020b) report, China controlled the epidemic in three stages. In the first stage (mid-January), China aimed to prevent the exportation of cases from Wuhan and also to prevent the importation of cases to block transmission and control the sources of infection. On 10 January 2020, CDC informed WHO the whole genome sequences of the COVID-19 virus.

In the second stage (late January to mid-February), the national key strategy was to contain the spreading of the coronavirus and to categorise and treat the infection cases.

In the third stage (late February to mid-March), national strategy was mainly focused on reducing clusters of infected cases, continued the stringent containment and social distancing practices.

Figure 3 shows that China was on a steady recovery road and most noticeable after 1 March.

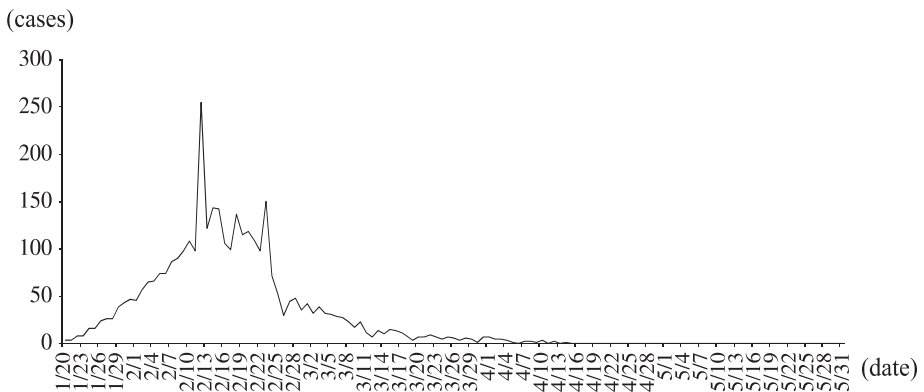
**Effective containment**

The following statistics compiled by The Centre of Health Protection of Hong Kong (CHP HK, 2020) show that China had well contained the coronavirus within the epicentre province, Hubei. Understandably, Hubei was badly hit – 68,149 infected cases or 85% of the China’s total, and 4,512 deaths or 97% of the China’s total. The province’s sacrifice had effectively saved substantial casualties of nearby provinces such as Hunan, Zhejiang, Henan, Guangdong, indeed, the rest of China. Consequently, other provinces had only 1 or 2% of the country’s infected cases and with only single or low double-digit number of deaths. This study thus focused on Hubei, especially on Wuhan – the war zone.

**The scorecard**

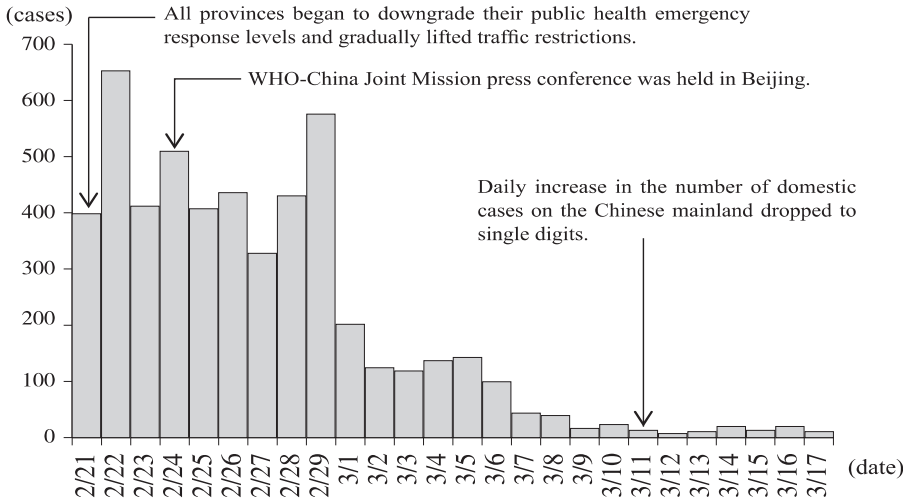
Despite hiccups at the beginning, China swiftly pulled together to combat the pandemic with effective strategies and execution. Table 1 shows its achievements as compared with the world and the US statistics:

Figure 4 shows the efficacy of treatment. The number of cured cases was substantial despite that the healthcare systems were overwhelmed at the peak of the pandemic at the epicentre.



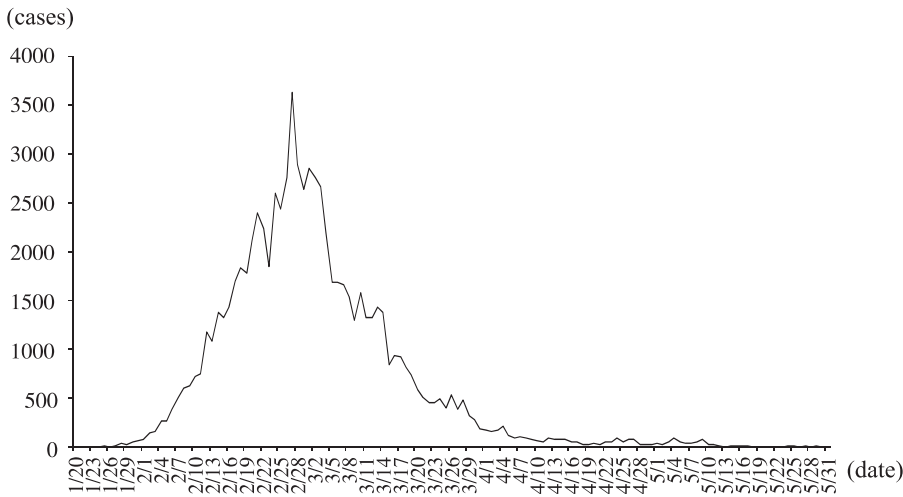
**Figure 2.**  
Daily Fatality Figures  
for China (20 January –  
31 May 2020)

**Source:** The State Council Information Office of the People’s Republic of China (2020)



**Figure 3.**  
Daily Figure for Newly  
Confirmed Cases in  
China (21 February-17  
March 2020)

Source: The State Council Information Office of the People's Republic of China (2020)



**Figure 4.**  
Daily Figure for Cured  
Cases in China (20  
January – 31 May 2020)

Source: The State Council Information Office of the People's Republic of China (2020)

Country	Total cases	Total deaths	Total Case per million population	Deaths per million population
World	61,301,380	1,437,629	7,864	184
The USA	13,248,676	269,555	39,931	812
<b>China (Mainland)</b>	<b>86,495</b>	<b>4,634</b>	<b>60</b>	<b>3</b>

Source: [Worldometer](https://www.worldometer.com/) (2020)

**Table 1.**  
Reported COVID-19  
Cases and Deaths as of  
27 November 2020

The editors of the *New England Journal of Medicine* (2020, p. 1479) commended China that “[F]aced with the first outbreak, chose strict quarantine and isolation after an initial delay. These measures were severe but effective, essentially eliminating transmission at the point where the outbreak began.” The following analysis shall unveil the nation’s overall pandemic strategy.

### **Chinese public health administration in crisis management mode**

Lai (2011, p. 95) alludes that Chinese epidemic management institutions have been effectively overhauled by Wu-Wen leadership right after SARS in late 2003 onward. Such measures laid down a solid groundwork for the defence against this coronavirus attack. Zhou (2020) highlights two key characteristics of the current Chinese public health administration. First, charismatic leadership based influence – President Xi shall set the directives and tone for the pandemic strategy and the entire Chinese Communist Party’s propaganda machinery shall promote Xi’s mission statements for the campaign. Second, “recentralisation” of the authority and power from local back to central government – regional, provincial, city, town and village governments shall strictly follow the commands, guidelines and protocols in detecting, chasing, containing and treating coronavirus cases. Healthcare and medical workforce, equipment and Personal Protective Equipment (PPE) are centralised and allocated mainly to Wuhan and nearby cities in Hubei.

More specific public health crisis management initiatives directed by President Xi and the central authority are as follows (based on NHC, CDC and WHO reports or otherwise stated):

- (1) *Key mission statement: for the people and of the people – putting people’s lives and health first*

The purposeful mission promoted national solidarity and boosted the spirits of voluntary healthcare and support workers (*The Lancet*, 2020). Upon Wuhan’s epidemic was confirmed, the state government decisively imposed the unprecedented lockdowns of Wuhan and eventually Hubei for 76 days. Consequently, the epidemic was largely contained within Wuhan so that the nation’s resources could pull together and focus on rescuing the coronavirus victims in the city. The rest of the mainland and neighbouring cities such as Hong Kong and Macau of China could gain time to tighten their preventive and control measures against the virus invasion.

- (2) *Law-based and science-driven strategies*

While imposing abrupt and dragooning measures and at huge economic and social costs, scientific evidence supported the actions and they were legally executed.

- (3) *Unified and seamlessly connected administration system*

President Xi at State Council level meeting set the missionary goal and strategic directives. Between January and May of 2020, Xi chaired 18 meetings to hear from heads of healthcare administration departments’ briefings and he instructed measures in response to epidemic dynamic situations. Premier Li Keqiang translated the state goals and directives into programmes and plans and aligned all levels of government departments and agencies to seamlessly implement them accordingly. State leaders have travelled frequently in person to cities severely affected by the coronavirus to build the trust and spirit of healthcare workers and people.

- (4) *Four ways of early responses – early detection, reporting, isolation and treatment*

Strict performance commitments and protocol versions have been imposed on the parties involved so that they act accordingly. On detection, nucleic acid testing capacity has been

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expanded to an average of 3.78 million tests per day in June. On reporting, hospitals report infected, discharged and death cases online within 2 hours; laboratories report the results within 12 hours; CDCs complete epidemiological investigations and follow up close contacts within 24 hours. On case reporting, suspected cases, confirmed cases, or asymptomatic infected individuals were required to report. Web-based reporting system has to be within 2 hours after diagnosis; information checking by CDCs within 2 hours after receiving the report. To improve quality of treatment, patients are categorised into severe, critical, mild symptoms and light symptom or asymptomatic patients, whom are being treated in different locations with different medical care facilities. Moreover, patients are treated with personalised treatment plans, typically mixed with western and traditional Chinese medicines though the effectiveness of the later on infected cases was only supported by anecdotal evidence (Cyranroski, 2020).

(5) *Coordinated supply and distribution of resources*

Medical, healthcare and support workers flocked in coupled with thousands tons of medical supplies and PPE flooded into Wuhan from different parts of China in January. It required superior logistics and operation plans to deploy these resources to hospitals, building sites, temporary treatment centres. Based on the rapid expansion of hospital capacity and sharp declined of infected cases and deaths in Wuhan starting from mid-February, the provincial and municipal's resources coordination and deployment plans have been effectively executed. Manufacturers have also been responding to the government's call to face masks and other PPE materials. Food suppliers have ensured an abundant supply to supermarkets and online orders to maintain the people's daily needs.

(6) *Rapid and flexible improvement in treatment capacity*

Over 42,000 medical professionals, including 19,000 respiratory and intensive care unit doctors from at least 19 provinces responded to the state government's call flew in Wuhan in late January. Hospitals and treatment centres were built in lightning speed from having 5,000 to 23,000 beds, including three makeshift hospitals with 4,000 beds completed in days. Such expansion in healthcare capacity had timely accommodated hiking number of infected patients and enabled an orderly triage, isolation of severe or high contagious cases from mild cases. Most of the Fangcang shelter hospitals and temporary treatment centres have been closed in April as the daily infected cases in Wuhan and nearby cities reduced to zero or single digit (Chen *et al.*, 2020).

(7) *Application of high-tech measures*

Telecommunication technologies supported by 5G network enabled Wi-Fi and internet coverage across the country to support big data analysis for speedy infected case chasing and reporting, remote clinical consultations and other epidemic prevention and control measures. The government joined hands with tech giants such as Alibaba and Tencent to develop a colour-coded health rating system for tracking millions of people daily. AI and GPS technologies supported lockdown surveillance, such as facial recognition, case chasing and containment measures were effective (Chaturvedi, 2020).

(8) *International exchange and cooperation*

The state's directive is to share China's coronavirus knowledge and scientific discoveries with the world, such as providing a full genetic sequence of the coronavirus strain to WHO in January (Lu *et al.*, 2020). It has also shared the best practices with other countries by publishing *Multilingual epidemic control manuals for COVID-19, Protocol for Prevention and Control of COVID-19 Cases* and other coronavirus related healthcare resources via China

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NHC and China CDC official channels and websites and regularly exchanged of COVID-19 statistics with WHO and other countries. China in March and April 2020 donated an amount of US\$50 million to WHO to support its global coronavirus pandemic response (*The Straits Times*, 2020).

### **The public health governance structure in times of crisis**

China established the Joint Prevention and Control Mechanism of the State Council to coordinate epidemic control initiatives across government sectors at provincial to municipal levels. The NHC led the Joint Prevention and Control Mechanism and convened multiple working groups for the national COVID-19 response, including scientific research, clinical treatment, and medical supplies (Chen *et al.*, 2020). Other key supporting organisations and units, including: NHC's the New Coronavirus Pneumonia Expert Group on Medical Treatment Centre, Disease Prevention and Control Bureau; China CDC's National Institute for Viral Disease Control and Prevention, Public Health Emergency Centre, Wuhan City Novel Coronavirus Prevention and Control Command Centre; Chinese Academy of Medical Sciences and National Immunization Program Expert Advisory Committee.

This crisis management case echoes Christensen and Ma's (2018) assertions that coordination between the vertical (state-provincial-municipal) levels and horizontal (various experts and planning support units) mechanism is of great importance to its effectiveness of management. Owing to its hiccups at the beginning at Wuhan, there were trust issues between the people and local government and also between the central and local authorities, which was also what Christensen and Ma (2018) and Shangguan *et al.* (2020) argued as inherent political realities in China. Hence Zhou (2020) advocates that the central government has capitalised on the crisis to recentralise the power and authority back to the state government. The above state-leading measures against the COVID-19 with active support from all fronts were forcefully and stringently implemented across all levels of government down to individual healthcare units and inhibited local discretions. Municipal mayors and other government officials who failed to act in compliance with published protocols and policies had been removed from their offices. Consequently, when comparing with several key provincial and municipal practices, they were quite consistently implemented. Apparently, the epicentre of Wuhan had a larger scale and scope of operations as reported above.

Given the unprecedented nature of the outbreak, the scale and scope of the pandemic project that China has launched, it is inevitably an important case for public administration study. This paper attempts to theorise about China's strategy and execution in combating the pandemic with the 3H framework on an exploratory basis.

### **Introducing the 3H framework**

#### *What is the 3H framework?*

The 3H framework is newly developed for managing imperative people and organisational/national issues holistically. The framework's key domains are represented by the metaphorical expressions of Heart, Head and Hand. It aims to develop a holistic solution to manage people and the national/ organisational issues. Each H domain of the 3H framework has an array of theoretical groundworks rooted from well-established literature in the respective fields illustrated below.

#### *What is the 3H framework for?*

The 3H framework postulates that the most effective way to manage people's and organisational issues is a holistic approach. There are necessary and sufficient conditions to

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fulfil in order to satisfy the holistic management approach. Few organisations or countries can sustain long-term competitiveness if they can only fulfil partial 3H framework conditions. By referring to the 3H framework, it can systematically guide us in holistically developing and executing a strategic plan. It should not be considered as a cookbook recipe or even treated as an ISO operation template. Rather, it should be regarded as a paradigm of thought or a mental schema. If it is successfully embedded in the minds of leaders, they should be able to intuitively plan and execute their strategies effectively and efficiently with the 3H approach. The importance of addressing all 3H domains in strategic planning and execution appears to be obvious to people, yet sadly, we witnessed some country leaders failed to holistically manage the COVID-19 outbreak in their countries and that oversight was very costly in terms of human and economic losses.

### The conceptual framework

As a new framework, the following algebraic expression helps conceptualise the functional relationship of the H domains.

National COVID-19 performance (NP), the dependent variable, is a function of the complements among Heart (H1), Head (H2) and Hand (H3) independent variables of that country.

$$NP = f(H1cH2cH3)$$

NP = National COVID-19 Performance

c = Complement to integrate and connect

H1 = Heart domain (emotional appeal, leading, motivating and engaging people's abilities)

H2 = Head domain (logical and strategic appeal, planning, organisational, cognitive abilities)

H3 = Hand domain (competence appeal, operational/ functional abilities)

Each H's domain carries different weights. In this study, H1 carries much heavier weight than H2 and H3, whereas H2 carries a relatively heavier weight than H3. Reasons being, even though a country's healthcare strategy, system and competence are more advanced, if the leader fails to unify and motivate people to fight the coronavirus war, the country would fall apart and may even turn into an internal-fighting battlefield scrambling for resources.

The Venn diagram (Figure 5) illustrates the necessary and sufficient conditions (independent, moderating variables) contributing to effective and efficient national performance (dependent variable).

#### *Four case scenarios*

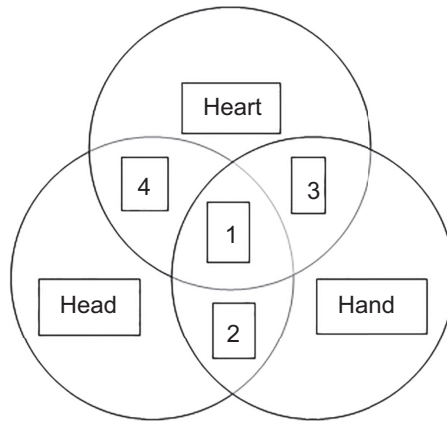
Case 4 - Effective leadership (H1) and sound strategy (H2) are in place but lacking competent healthcare professionals (HCPs) (H3).

Case 3 - Effective leadership (H1) and HCPs (H3) in place but lacking sound strategy (H2).

Case 2 - Sound strategy (H2) and HCPs (H3) are in place but lacking effective leadership (H1).

Case 1 - Integration of domains of H1, H2 and H3 shall secure the necessary and sufficient conditions for effective and efficient national performance in combating COVID-19 pandemic.





Source: Yu (2020)

**Figure 5.**  
The necessary and  
sufficient conditions  
for holistic pandemic  
management

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The 3H framework posits that the effective and efficient pandemic management hinges on the level of synthesis among H1, H2 and H3 domains of the nation as indicated at Case 1 – intersection of three circles in the centre. This is a holistic approach, arguably the way to minimise the country's number of deaths, infected cases and lower economic costs.

### Research method

A descriptive case was created based on content analysis conducted on over 100 credible reports, press releases from different respected sources, e.g. *The Lancet*, WHO statistics, interview transcripts and broadcasting stations' video clippings. Interpretive analysis with pragmatism approach has been conducted in analysing the data and information derived from the content analysis. Triangulation, wherever possible, has been done to validate the data and information. The assumptions of the study are created with the following literature and tested with supporting conversational and or textual statements.

### 3H framework related literature and concepts

Each H domain of the 3H framework has an array of established theoretical groundworks rooted from well-established literature in the respective fields.

Broadly, H1 Heart-related literature: Organisational behaviour related (e.g. motivation, emotion, commitment, engagement, satisfaction, trust); leadership, management of change; values and organisational culture, cross-cultural management; communication; managing groups and teams. Based on this literature, for instance, [Bass's \(1995\)](#) works on transformative leadership, particularly emotional appeal, over the long-term rather than the transactional relationship with followers are emphasised in this domain.

H2 Head-related literature: Organisation architecture (organisational design, structure, alignment); strategic management related (e.g. macro-industry analysis, institution, resource-based view, value chain, levels of strategy); management planning and control (e.g. balanced scorecard, strategy map). Strategic thinking and planning in this domain are represented by [Mintzberg's \(1987\)](#) crafting, people engaging rather than formulating or mechanical approach.

H3 Hand-related literature: Competence related; functional strategy and practices, e.g. HR, Operations, Finance, IT related. The competence and competitive advantages of a firm are analysed with [Barney's \(1996\)](#) resource-based theory with special reference to his views on path dependence and social complexity.

## Underlying assumptions of the 3H framework for applying for this study

Literature based assumptions have been created, which is first referred to a H domain number and the number within that domain, e.g. the first assumption of the Heart domain is referred as: H1-1 (Table 2).

China's strategy  
in combating  
the coronavirus  
pandemic

Domain	Assumptions and literature based
<b>Heart (H1)</b> It should be coded as H1-1, H1-2 and so on	<ol style="list-style-type: none"> <li>Heart-to-heart and reciprocal behaviour goes side-by-side and it maintains long-term relationship (Hinton, 2013; Hu <i>et al.</i>, 2011).</li> <li>People are willing to sacrifice for a honourable cause, purpose, shared value and belief (Carton, 2018; Sussman <i>et al.</i>, 1983).</li> <li>Heart-oriented leader shall create a conducive climate for uniting people to achieve common national goals (Bui <i>et al.</i>, 2017; Hunt, 2017).</li> <li>Human nature has both good and bad elements, Heart-oriented leader shall help employees develop their good selves and have them behaved themselves to control their bad elements (Hinton, 2013; Gurbuz <i>et al.</i>, 2014).</li> <li>An effective Heart-oriented leader would yield committed followers who wanted to get the jobs done well. It is transformational-based (Asencio, 2016; Lehmann <i>et al.</i>, 2013).</li> </ol>
<b>Head (H2)</b>	<ol style="list-style-type: none"> <li>Effective strategic planning process is a necessary factor for national project success (Bryson <i>et al.</i>, 2018; Genc and Sengul, 2015).</li> <li>Planning, organising and controlling process calls for rational, logical and strategic thinking to address short-, medium- and long-term needs of the national project (Hussey, 1999; Menon, 2018).</li> <li>However, effective strategy translation and communication across different levels of organisation is a necessary management responsibility and it is an art more than a science (Tam <i>et al.</i>, 2005).</li> <li>Head-oriented leadership concerns more on rational rather than emotional aspects in leading. At best, people are convinced that they ought to do the assigned jobs but they may not be committed or interested in doing it. It is transactional-based (Asencio, 2016).</li> </ol>
<b>Hand (H3)</b>	<ol style="list-style-type: none"> <li>Efficient execution of strategy with required competence and resources is a necessary factor for national project success (Grant, 1991).</li> <li>Agility and speed to satisfy people's needs are useful criteria for evaluating the competence of the nation in managing the incumbent project (Yu, 2020; Yu <i>et al.</i>, 2016).</li> <li>Leaders should know the level of competence that his followers possessed. If they do not possess the required skills or knowhow, leaders should ensure they will be trained to learn it or mobilise support from other sources; otherwise, that may be a main cause of resistance or unnecessary wasting of resources and time (Kor and Leblebici, 2005; McGrath <i>et al.</i>, 1995).</li> </ol>
<b>3H - integrated</b>	<ol style="list-style-type: none"> <li>Holistic management of people and organisation means all 3H domains are synergistically integrated with one another, neither one nor a couple of H are sufficient for national project success (Senge, 1990; Yu, 2020).</li> <li>It is the national leader's responsibility to ensure all 3H domains are effectively in congruent with one another (Hinton, 2013; Rogers, 2010).</li> <li>3H framework aims to holistically manage people and organisation issues, which will lead to people wanted to do the purposeful right jobs and able to do it right every time (Carton, 2018; Sussman <i>et al.</i>, 1983; Yu, 2020).</li> </ol>

**Table 2.**  
Underlying assumptions of each 3H domain with relevant literature for the study

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## Applying 3H framework to analyse China's strategy in combating the coronavirus pandemic

### *Testing the proposed necessary and sufficient factors*

From the leadership perspective of the H1 domain, it can be broadly divided into the Heart- and Head-oriented perspectives. The Heart-oriented perspective puts people's lives and health over all other considerations; whereas the Head-oriented approach is rational and puts economic and political interests first.

#### *H1. Heart-oriented leadership that can engage and motivate followers is the first necessary factor.*

On 7 February, 2020, President Xi spoke on the phone with US President Donald Trump, stressing that "China is committed to safeguarding the lives and health of not only its own people but also those around the world". He also speaks at the G20 Leaders' Summit on COVID-19 on 26 March: "From day one of our response to the epidemic, we have made life and people's health a priority" (CGTN, 2020) (H1-1).

Unfortunately, some country leaders deliberately played down or dismissed the threats.

Heart-oriented leadership emphasises on uniting people and engaging them to achieve common goals and to promote reciprocity supports between the government and people. President Xi made the following announcements after Wuhan's lockdown.

Xi: The Chinese nation has experienced many ordeals in its history, but it has never been overwhelmed. Instead, it has become more and more courageous, growing up and rising up from the hardships. The epidemic situation remains grim and complex and it is now a most crucial moment to curb the spread. (*Xinhua*, 2020) (H1-2).

Xi asked Party committees and governments at all levels to continue to make unremitting efforts in various prevention and control work and resume work and production in an orderly manner. (*Xinhua*, 2020) (H1-3)

In February, massive communication through national-wide television and social media reported the honourable missions of the healthcare workers across the country, left their families in Chinese New Year went to Wuhan to save lives. Such a heroic act boosted the patriotic spirit and led to enthusiastic support and cooperation of the national policies and measures in combating the coronavirus war. However, if a country leader instead of uniting different states with common goals to fight the pandemic war, he divides the country that would create a hunger game mentality among people – mayors would scramble for each other's healthcare resources. The ugly side of human behaviour may prevail (H1-4).

The remarkable success of China's containment strategy, 85% of the country's total infected case contained in Hubei (mostly in Wuhan), will not be possible without Xi's transformational-based leadership (Asencio, 2016) as illustrated in health administration section described above and people's trust on their President thus full commitment to the State's draconian containment measures (Lehmann *et al.*, 2013) (H1-5).

The above analysis also indicates that Heart-oriented leadership that could engage, motivate and unite people is the first and arguably the most important necessary factor in beating the national pandemic. On the contrary, as Allen (2020) posits, the lack of common social purpose, poor leadership and federalism could lead to devastating outcomes.

3H framework argues effective leadership alone, while essential, is not sufficient to win the war against COVID-19. It requires a robust strategy and effective execution to fulfil the other necessary factors. This leads us to examine the strategic planning for the COVID-19 pandemic.

#### *H2. Head domain driven effective strategy planning process is the second necessary factor.*

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Bruce Aylward, Team Leader of the China-WHO Joint Mission, spoke highly of the effectiveness of China's coronavirus strategy and execution discussed above; with which China has triumphed in the pandemic war (WHO, 2020a).

Judging from the remarkable outcomes noted by the editors of the *New England Journal of Medicine* (2020), the strategy appears to have been coherently developed and precisely addressed the emergency and long-term goals (H2-2). Countries with less effective nationwide united strategies are typically ad hoc, fire-fighting, piecemeal basis.

President Xi-led Central Committee has mobilised the national propaganda machinery to explain and teach people how to help execute the short- to long-term strategies. Apart from getting the strategy well communicated to all targeted audiences, the way to do it was engaging and motivational (H2-3).

It appears if country leaders' minds are occupied by their personal political interests, people's lives and health would not be protected with rigorous public health prevention and control strategies. Consequently, as the editors of the *New England Journal of Medicine* (2020) condemned: "[O]ur leaders have failed the [leadership] test. They have taken a crisis and turned it into a tragedy." (H2-4).

If the nation is fortunate to have a heart-oriented leader and a comprehensive strategy for combating the coronavirus, the last hurdle is fulfilling the Hand domain – effective execution of the strategy with an appropriate set of competence.

*H3. Hand domain that developed the competence to efficiently execute strategic goals is the third necessary factor.*

The execution of the public health administration strategy discussed above is examined to test the H3 Hand domain assumptions below.

The operation strategy of detection, reporting, isolation and treatment has proven to be effective in containing the outbreak in Wuhan, Hubei and subsequently in other parts of China. Such arduous tasks commanded superior healthcare management and technical competences (H3-1).

Rapid and flexible improvement in treatment capacity – in swiftly expanding temporary treatment capacity discussed is in world-recorded speed and scale. It requires distinct organisational agility and competence to accommodate massive, urgent demands for hospital beds and treatment capacity (H3-2).

Apparently, at the peak of the coronavirus outbreak, there were shortages of experienced healthcare workers everywhere. NHC, in order to ensure professional standards in treatment practice across the country, it promoted best practice sharing and coaching new healthcare workers with publications, such as versions of *Multilingual epidemic control manuals for COVID-19, Protocol for Prevention and Control of COVID-19 Cases, Diagnosis and Treatment Protocol for COVID-19, Guidelines for Investigations and Management of Close Contacts* (H3-3).

### **The sufficient factor – effective integration of 3H domains**

Even though China has a sound strategy with thousands of professional healthcare volunteers flocking to Wuhan, if leaders fail to properly team up and deploy them to the right places, they would not be able to function effectively. National leaders are entrusted with the responsibility of creating the sufficient factor to ensure the effective strategy be executed holistically; judging from the seamless integration among the leadership, strategy and execution, China has created an effective holistic model (3H-1).

President Xi could raise the level of solidarity and patriotism to the highest level during a deep pandemic crisis that demonstrated exemplary holistic leadership (3H-2).

With reference to the governance structure discussed above, we saw the critical roles that President Xi, Premier Li Keqiang and other central government leaders walked the talk and

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spearheaded executions help engage their people as evidenced by hundreds of thousands of volunteers from different parts of China responded to the leader's call and enthusiastically participated in fighting against the coronavirus at Hubei. All these outcomes evidenced the synergies created from the effective integration of 3H domains and hence meeting the sufficient condition of the holistic management on the pandemic (3H-3).

### Limitations

China's lockdown, isolation and quarantine measures prevented the author from validating the case information with the protagonists and other relevant personnel and could not make a personal on-site observation or interview with informants in person. Therefore, the reporter's information may be biased albeit the author has tried to validate the case information by handpicking credible sources, verifying data and views by triangulation. For example, a conversational statement by President Xi Jinping has been cross-checked with text, video from the mainland, Hong Kong or international (e.g. WHO, BBC, Bloomberg, SCMP) sources. Some of the assumption tests were based on anecdotal evidence that may be subjective. The development of the theoretical framework with this study is intended to be exploratory, hence its assumption test is not meant to be confirmatory.

### Conclusion

The episode of COVID-19 pandemic teaches us that countries even with world-class healthcare specialists, advanced medical technologies, well-equipped hospitals and ample time for preparation could still badly lose in the pandemic war if their leaders are concerned about political or economic interests more than their people's lives or failed to unit and engage all people to fight against the pandemic war. With the 3H framework's lens in examining China's strategy and execution in combating the pandemic, it shows that China has achieved a high score in all H domains, particularly on the Heart dimension. Unsurprisingly, China has low casualties and could recover rapidly, resulting in much lower social and economic costs in this coronavirus pandemic. The framework appears to be useful in predicting the effectiveness of a country's pandemic strategy and execution. The mission of "Putting people's lives and health first", which was identified as the key success factor in winning the pandemic war, is not necessarily driven by ideology or "ism" – it is more related to the leader's humane orientation and vision. Similarly, the holistic approach to public health administration amidst pandemic crisis is not an exclusive competence of democratic or autocratic regimes – it is a matter of sound public governance.

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