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Early or Late: A Comparative Sociological Study of Zero COVID Policy

BY

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Abstract

Among the countries that have effectively implemented Zero COVID(ZC), why are they all been able to adopt similar policies to achieve the status of Zero COVID while the patterns of ending zero Covid are so different? The pattern of ending ZC falls into two general types. Type A (Australia and Zealand) were for countries that were able to gradually deregulate their social restrictions to terminate Zero COVID and move to enhanced medical logistics to face future death peaks from pandemics. Type B (China and Vietnam) were those countries that insisted on strong social restrictions and failed to strengthen medical logistics, resulting in the need to declare an end to the Zero COVID policy when the peak of deaths occurred. As a result, the pattern of ending in type A countries was a more orderly transition to the post-epidemic era, with less cost in lives paid for the epidemic. By incorporating both temporal and structural narratives, this essay suggests that regime legitimacy contributed to the different patterns of Zero COVID policy. In particular, the source of regime legitimacy affects whether policy-making is more value-oriented or instrument-oriented. Countries with instrument-oriented policies have strong professionalism that is more able to plan for long-term transition policies to reduce total costs. State capacity is a necessary condition for assessing a policy's implementation, but when state policy is dominated by value and ideologization, it can instead create greater negative consequences.

I **Background**

Since the rise of COVID-19 in December 2019, our age has faced one of the most profound global crises. In the first two years, the total number of deaths directly or indirectly

related to the COVID-19 pandemic exceeded 14.9 million (WTO 2022). In response to this public health crisis, the state, an actor that surpassed all other institutions, assumed mainstream control of the epidemic. State policy in this cross-national context becomes critical in examining a country's ability to respond to epidemic disasters and its indirect costs.

Zero Covid policies and Mitigation strategies were the two main approaches adopted by states during the pandemic (Oliu-Barton 2021, Li&Chen 2020). The Zero COVID (ZC) policy suggests using aggressive public health measures to eliminate COVID-19 locally to reduce the long-term socioeconomic costs and loss of life from the pandemic. Mitigation strategies question the effectiveness of Zero COVID and suggest using routine interventions to mitigate the impact of the virus on the community, but still tolerate some level of spread. Of these two policies, only a small number of countries have adopted a Zero COVID policy because it requires a higher level of state capacity and trust from society (Sun 2021, Vu 2021, Kreulen 2022, Huang 2022, Bollyky 2022).[1]

In the aftermath, many countries that have adopted Zero COVID have lower overall mortality rates. Until August 2020, the rate of mortality per million population in ZC countries could be only one percent of that in other countries (Sun 2021). ZC is not a sustainable policy. As hyper-transmissible viruses such as the Omicron variant emerged, however, more and more countries are realizing the high cost and unrealistic nature of ZC. They have chosen to drop most public health restrictions. The number of infections and mortality rates in the countries that were under ZC policy then experienced a rapid increase, but the advantages of ZC policies remained,

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[1] There are 17 countries claimed that have adopted a Zero COVID policy, including Australia, Bhutan, Atlantic, and Northern Canada, mainland China (including Hong Kong and Macau) Montserrat, Montenegro, New Zealand, North Korea, Northern Ireland, Singapore, Scotland, South Korea, Taiwan, East Timor, Tonga, and Vietnam. However, zero-zero countries remains a vague definition, as many countries that claim to be Zero COVID, such as Canada, have not done extraordinarily well in terms of their death populations. The detailed measurement of the specific criteria for Zero COVID countries will be elaborated in section II of this paper.

as the lockdown and tracking allowed nationals to avoid becoming infected with the virus during a period of high fatality. When they dropped their ZC policies, the damage to human health from the highly transmissible virus had been greatly reduced. Table I and II present the mortality rate per million population due to the virus in countries that have adopted a ZC policy or not. Deaths in countries that implemented ZC policy are all in the range of 300 to 600 per million, while deaths in developed countries in Europe and the United States in Table 2 are in the range of 2000-3000 per million.

Table 1: Number of deaths due to Covid per million population in countries that have adopted a Zero Covid policy (By 2023/1/29)

Country	Time of the first diagnosis	Number of deaths per million population	Total number of deaths	Total number of Population (million)
China	2019/12/1(In Hubei) 2020/1/21(Out of Hubei)	78.74 Or 679.89[2]	111,173 Or Approximately 960,000	1,412
South Korea	2020/1/20	644.22	33,332	51.74
Vietnam	2020/1/23	443.06	43,186	97.47
Singapore	2020/1/23	315.36	1,720	5.454
Mongolia	2020/3/10	638	2,136	3.348
New Zealand	2020/2/28	481,75	2,468	5.123
Australia	2020/3/4	661.30	169,89	25.69
Taiwan	2020/1/21	688.33	16,224	23.57

[2]Several estimates based on the Shanghai outbreak and travel patterns suggest that the total number of deaths in China should range from 600,000 to 2.3 million. The data used here are from a December 2022 article estimating the number of deaths in China at the end of January (Leung & Leung, 2022, Cai & Deng, 2022).

Source: Population from: https://datatopics.worldbank.org/world-development-indicators (2021)

https://covid19.who.int/table (2023/1/29) data about Taiwan from:

https://ourworldindata.org/covid-vaccinations?country=OWID_WRL

Table 2: Number of deaths due to Covid per million population in Euro-America

countries that have not adopted Zero a Covid policy

Country	Time of the first diagnosis	Number of deaths per million population	Total number of deaths	Total number of Population (million)
United States	2020/1/20	3, 765.47	1,249,761	331.9
United Kingdom	2020/1/31	3,032.39	204,171	67.33
Germany	2020/1/27	1,986.94	165,314	83.2

Source: Population from: https://datatopics.worldbank.org/world-development-indicators (2021)

https://covid19.who.int/table (2023/1/29)

ZC policies are effective in saving more lives in an epidemic, but the economic cost of

long-term ZC can be significant. Countries have weighed the pros and cons of ending zero at

some point, but the pattern of ending strict regulation varies greatly from case to case.

I find that the pattern of ending ZC falls into two general types. Type A was for countries

that were able to gradually deregulate their social restrictions to terminate Zero COVID. As these

countries anticipated in advance that the utility of long-term Zero COVID for outbreak control

was diminishing, they move more of their efforts to enhance medical logistics to face future

death peaks from pandemics. In these cases, the infected population will arrive at a peak after the

initial deregulation and then decline steadily. These countries would take approximately one year

from the declaration of termination of ZC to the elimination of all COVID-19 regulations and

restrictions and cost fewer lives in the post-ZC era.

Type B is those countries that abruptly deregulated Zero COVID. In these countries, they were obsessed with tough Zero COVID policies to confront the epidemic and failed to prepare for the transition phase and medical logistics of the post-ZC era. When the outbreak spread more than expected, they embarrassingly declared the policy a failure and ended them. The differences between the two classifications are also reflected in the variation in the number of deaths. The tough policies of the countries in Category B, while saving many lives in the early stages of the epidemic, resulted in a significantly higher mortality rate in the second stage compared to the countries in Category A, as they were less well prepared in terms of medical logistics, vaccines, and public health policies for the "living with the virus" phase (Dyer 2023).

This article, by using a historical-sociological approach, aims to answer the question that Among the countries that have effectively implemented Zero COVID, why have they all been able to adopt similar policies to achieve the status of Zero COVID while the patterns of ending Zero COVID are so different? The study will first discuss how to select and measure cases in zeroing countries to meet comparable criteria. This will be followed by an overview of past literature and theory, noting that the narratives of these studies cannot answer complicated proposals such as epidemic governance across multiple countries. The thesis will then propose a historical sociological explanatory framework and enter into a bilateral analysis of these cases in terms of temporal and mechanisms. The concluding section of the study will point out the state-society tensions behind the formulation and implementation of epidemic policies in various countries.

Ⅱ **Case selection and measurement**

The cases selected for this paper take into account two indicators: (1) The country's ZC policy at the beginning of the epidemic (before delta) was effective in containing the spread of

the epidemic and keeping the number of infections under control. (2) Countries cannot be so small that they have lost their comparability. (3) There is a certain amount of diversity of culture and polity within the sample countries to ensure that the sample countries are representative.

Based on different criteria, The number of countries that can be said to have adopted Zero-COVID policies is inconsistent. Some countries go back and forth between strict lockdowns and open policies, while others stick to harsh policies for a long time. Thus, indicator I ensure that case countries are effective cases that have achieved a stop to the spread of the epidemic within a certain time frame. Indicator II is designed to ensure that the case countries have enough information for comparative studies. Countries such as Montenegro or Bhutan, for example, with only a little information available would not be sufficient to be included in a comparative case. Indicator III is intended to assure that the diversity within the sample countries will reveal more general mechanisms rather than being limited to sample bias. Many published studies have analyzed Zero COVID countries in East Asia, such as China, Taiwan, Japan, Korea, and Vietnam, and have argued that Confucian culture and collectivism in East Asia provide favorable conditions for controlling the spread of the epidemic. This doctrine argues that governments in East Asia are more dependent on performance responsibility and that societies are more collaborative in their approach to government (Huynh 2020, Dinh 2020, Nguyen 2021, Huang&Liu 2021). As a result, epidemic shocks are far less severe here than in the West. However, this sample-based bias does not explain why "Western culture" countries, such as New Zealand and Australia, performed better than the vast majority of "East Asian countries. Thus, having the assurance that the sample countries span a wide range of cultural and political contexts can provide a more comprehensive mechanism for comparative research.

The measurement of when a sample country adopted or ended with a Zero COVID policy is based on two different indicators. (a) Whether the country has adopted more restrictive regulatory standards to achieve the elimination of all viruses within its borders. (b) Whether the country has officially declared a transition phase or has de facto reduced social regulation. The reason for adopting two parallel indicators is the constant tension between state plans and practice. At the beginning of the epidemic, many countries adopted aggressive lock-down strategies But did not yet establish ZC policies because of the limited knowledge of epidemic information. As the epidemic continues, after the first few months, some countries that have been successful in preventing the epidemic will officially give their official designation for their ZC policies. Others that were not as successful, such as Italy, fail to claim to be a ZC country (Safi, 2020). Thus, the measure of when a sample country adoption of a ZC policy is based on regulation practices, not the declared plan. Here I use whether a country adopts two of the four strategies as the measurement, including a state of emergency, strict control of international arrivals, lockdown, or mass tracking.

Both the announcement of the transition policy and the de facto social deregulation can be seen as turning points for the measurement of the end of ZC. For Type A countries, state plans often precede practice. The first phase of the COVID policy transition is rarely a true deregulation, and vaccination is often critical. For type B countries, on the other hand, there is no explicit national planning to guide the practice of the policy shift, as the ZC policy is called off during a sudden pandemic. Therefore, it is the actual deregulation in these countries that should be seen as the turning point.

Table 3: The turning point of the Zero COVID policies of sample countries

Country	Adoption of zero-covid policy	Transition	Completely termination of zero

			covid policy
China(except Wuhan)	2020/1/23	2022/11/12	2022/12/7
Vietnam	2020/4/1	2021/8/29	2022/8/17
Australia	2020/3/20	2021/7/30	2022/7/6
New Zealand	2020/3/21	2021/10/4	2022/9/12

Based on the above criteria, we can obtain four sample countries that span multiple polities and cultures. As shown in Table 3, China, Vietnam, Australia, and New Zealand are the four cases in this study. In the table, the timeline lists the different stages of the policy in each country. The beginning of the Zero COVID policy reflects when the country put into place/implemented a strict containment strategy for the outbreak. The transition represents when the country has placed actual deregulation on the agenda. The time it took for each country to terminate the Zero COVID policy was inconsistent, with China taking less than a month, while all other countries took about a year.

The figures below reflect the death curves for the four case countries during the epidemic. While all countries were able to contain the spread of the epidemic by mid-2021, Vietnam was the first to experience two waves of deaths from the Delta and the Omicron variants, respectively. As the first wave of deaths peaked, the Vietnamese government declared the zero policy unsustainable and tried to reverse the trend. China's data is even more tricky. China experienced major outbreaks in the spring and fall of 2022, respectively, and the official charts do not reflect an accurate picture due to massive underreporting. But the general trend can be captured, and during the Shanghai closure from March to June 2022, the Chinese government held fast to the Zero Covid requirement with an iron fist. It was not until the second wave pandemic in November 2022 that the end of Zero COVID was announced. The government did

not have to reveal some of the deaths until the following February, which made the second wave

of the pandemic death very high and delayed by two months. In Group A countries, which are

New Zealand and Australia, the reported death curves due to Covid follow similar trends. In both

countries, deaths from COVID only gradually emerged several months after deregulation. The

number of deaths remained steady in the two digits, rather than in the hundreds or even tens of

thousands, as in the countries in Group B. This demonstrates that the effectiveness of transition

policies in reducing mortality in type A countries has prevented the emergence of large and

sudden outbreaks[3].

Figure 1: Number of reported deaths due to COVID in Vietnam with lines to
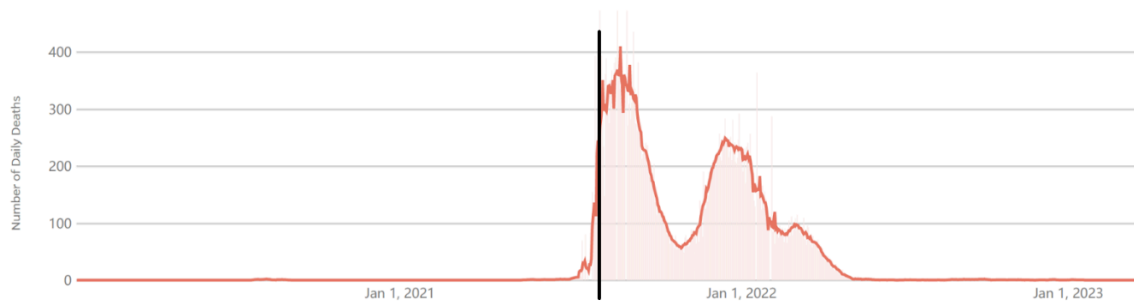
denote the date of deregulation

Figure 2: Number of reported deaths due to COVID in China with lines to denote

the date of deregulation[4]

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[3]It is worth noting that there are several convex curves until 2022 in Group A countries but not in Group B countries, which implies that China's and Vietnam's tough ZC policies are more effective in the early years. This part will be explained in the VI and VII section of my discussion of divergence of State policy. On the other hand, the data on the proportion of people who died in the later stages of the epidemic show that Group A is nevertheless better off than Group B.This suggests that, rather than insisting on ZC in the later stages of the epidemic, it would have been better to adopt a transition policy with improved medical logistics.

[4] China's actual daily deaths at the end of 2022 should be at the 100K level. The actual curve will begin to rise in early November, which is one month ahead of the line of denoting and has a very long tail as Vietnam (Figure 2). Refer to footnote two (Leung & Leung, 2022, Cai & Deng, 2022).
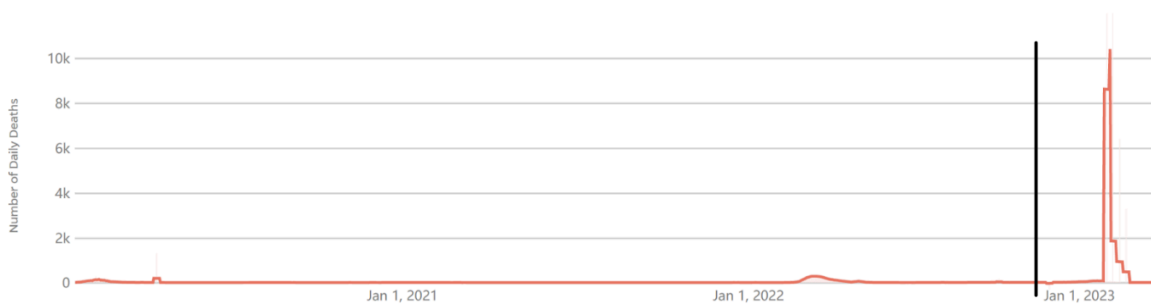
Figure 3: Number of reported deaths due to COVID in New Zealand with lines to denote the date of deregulation
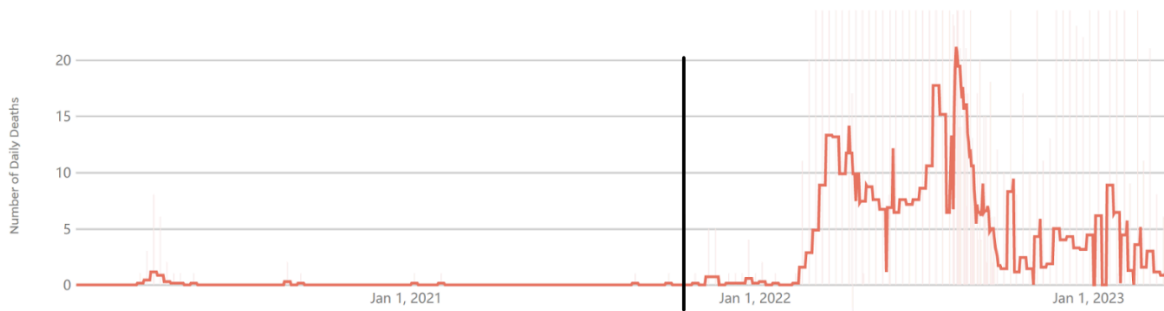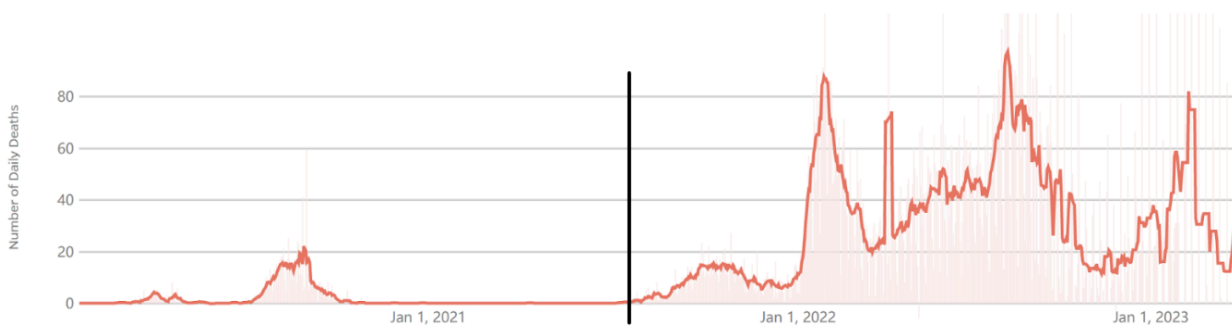

Figure 4: Number of reported deaths due to COVID in Australia with lines to denote the date of deregulation

All figures above: Data Sources: Cases and deaths data from JHU CSSE; testing and vaccine data from JHU CCI; and hospitalization data from the U.S. Department of Health and Human Services. Credit: JUH Coronavirus Resource Center.

Ⅲ Existing theories of prevention and containment models and their gap

In the existing literature on the analysis of epidemic prevention and control patterns, the various ways of interpreting state policies for epidemic response fall into two broad categories. The first type of literature is studies that trace policy changes in state responses to epidemics, which demonstrate how state policies react to epidemics as an exogenous shock. It focuses on examining the temporal narrative in which information feedback has had a path dependency on the state. The second type of literature unfolds in a structure-mechanism narrative, which analyzes why states' policies to prevent the epidemic ended up in outcomes of the policy implementation by emphasizing certain given state and social structures. Both narrative approaches, however, run the risk of simplifying the problem.

Temporal narratives and structural-mechanical narratives are not two separate research approaches; these two paths should be considered as an ideal type, in other words, two mutually independent ideal dimensions, while in reality, research is situated between these two dimensions (Zhao 2023). In studies dominated by temporal narratives, such as the review of Chinese epidemic policies, the agency and information feedback of social actors occupy the center of the analytical framework. Scholars have highlighted how the multiple policy instruments chosen by various policy actors at the beginning of the epidemic according to Variations in implementation led to inconsistencies in outcomes were often inconsistent with each other. This reveals why China's early response to the pandemic was chaotic and inconsistent (Mei, 2020). On the underreporting of the Wuhan issue, professional bureaucrats were extremely sensitive to political pressure, so much so that they chose to habitually follow their routine response to political pressure and party lines, which was to block information related to the epidemic for the sake of political stability (Zhou 2020). Articles in this category examine turning points in historical

events, such as the four phases of the emergency management system, or the two political

scenarios around January 2020, and argue that specific information feedbacks ultimately create

policy path dependence (Cai & Ye 2020, Zhou 2020).

The second type of literature centered on structure mechanisms is a more common way to

analyze the epidemic. In contrast to temporal narratives, structure-mechanism narratives apply to

comparisons across multiple country samples to uncover the dynamics and determinants of

structural factors. Among these, the available literature can be grouped into four main categories:

institution and state capacity, limited state and social trust, national cultural theory, and

legitimacy theory.

1: Institution and state capacity: Institutional arrangements frame the organizational

structures and informal norms that states develop to carry out their policy work. Specifically,

these structures respond to two dimensions of states' polity and state capacity. Scholars who

consider China and Vietnam as successful anti-epidemic countries claim that centralized states

with homogeneous governance structures are more capable of conducting containment when

faced with an epidemic, while democracies tend to adopt loose policies to constrain

individuals(Yan 2020, Steytler 2022). As a result, many democracies have rarely performed well

in epidemics. On the other hand, some defend the virtues of democracy, stating that, in a

democratic country, transparency in information improves government accountability and that

consent and authorization-based procedures guarantee the legitimacy of epidemic policies

(Berengaut2020, Frey 2020).

In terms of state capacity, the two main modes of epidemic prevention, lockdown, and

mass tracking, are both very demanding. A country needs to have a strong infrastructure, social

mobilization capacity, and universal access to digital technology to achieve quality epidemic prevention(Sun 2021, Cepaluni2022, Doan 2022). Despite the ongoing controversy over state polity, the advantages that state capacity brings to epidemic management are generally accepted by academia.

2: Limited state and social trust: This theory argues that the state is more than a set of institutional arrangements; it is in competition with society and with its internal components (Migdal 2001). This view prolongs the discussion of state autonomy, that is, how the state's infrastructural power can penetrate the constraints imposed on it by civil society. Implementing state policy in epidemic prevention and control relies on the trust of society and the state (Vu 2022, Szreter 2004). Fukuyama argues that the Trump administration, for example, has reduced American society's trust in the state to the point where the United States has failed to truly exercise its capacity to govern. (Fukuyama 2020) In practice, when a virus with high transmission potential emerges, the government needs to be able to convince citizens to implement the necessary public health measures. Many established quantitative studies also support this statement(Bolyky 2022). Thus, a society with high levels of trust and a state that can foster trust in times of crisis is better able to implement ZC policies effectively.

3: National cultural theory: This proposition comes from a simple induction, but is much discussed, which is countries with successful ZC policies generally come from East Asia. Such a theory believes the collectivist cultures of Asia have a higher tolerance for government intervention (Huynh 2020, Dinh 2020). In, for example, Confucian cultural circles, countries generally reached a social consensus during the COVID-19 crisis to comply with the lockdown(Nguyen 2021, Huang&Liu 2021).

4: Legitimacy theory: Legitimacy theory has its origins in Weber's concern with man's belief in the legitimacy of dominance (Weber 2013). Weber locates state legitimacy in popular perceptions of the sources of state power, and in response, elites defend the sources of state power to make them more convincing (Zhao 2017). The source of legitimacy of different regimes will be reflected in their prevention and control of Covid (Liu 2021). Regimes that base their legitimacy on ideology and procedure can better balance the effects and costs of epidemic prevention and control, but can also underestimate the threat posed by the epidemic because of their solid legitimacy. A state, on the other hand, bases its legitimacy on performance and must focus on the effects of pandemic prevention to ensure that its legitimacy does not falter (Sun 2021).

The two existing approaches to analyzing the COVID-19 policies both have major shortcomings. The study of temporal narratives fails to notice the universal structure in the differences across countries and is relegated to ad hoc explanations. In contrast, a single structural mechanism analysis of the four types of literature offers a variety of explanations for differences in COVID prevention policies across countries, but even among countries that have implemented ZC policies, none of the views adequately explain how these countries with different backgrounds were able to successfully control and prevent COVID-19. For example, in terms of state capacity, the country Vietnam lacks big data and tracking capabilities, and should not have been the most successful case country. New Zealand and Australia, for instance, are non-East Asian democracies that have also unexpectedly implemented strict city closures and achieved excellent performance. These studies that have been conducted have failed to provide models that have utility within the ZC countries to explain the patterns of their policy outcomes. Finally, as the vast majority of published studies were completed before the beginning of 2022,

they mostly focused on the state reaction and performance in the early stages of the epidemic, with few studies on how the Zero COVID policy was brought to an end. Therefore, this paper aims to combine temporal and structural-mechanical narratives to reduce the biases of a single perspective. This paper will also take the investigation of the ZC period implementation model deeper to better articulate the differences in the models to end Zero COVID.

Ⅳ **Framework**

This study will use the ideal type to analyze the variations among countries for the COVID pattern. The ideal type is an imaginary object that is constructed through thought. It is "unambiguous, precise and completely abstract non-existence through which to perceive a vague, fickle and elusive concrete reality. (Weber 1968) Weber proposed this concept to purify those abstract concepts to build models. Based on Weber's contribution, Dingxin Zhao further proposes that the "ideal type set", that is, each ideal type dimension is independent of each other, but together they constitute a "space" that can cover all possibilities of a certain type of sociological issue (Zhao 2023).

First, an ideal type set used in the study here is regime legitimacy, which includes three ideal types: performance, ideological, and procedure. These three ideal types correspond to the three most basic sociological mechanisms of state social relations: when all other conditions are controlled, the more important ideology is in the legitimacy of a state, the more important value rationality will be in the political thinking and behavior patterns of the population of that state; the more important political procedures are in the legitimacy of a state, the more important formal rationality will be in the political thinking and behavior patterns of the population of that state; the more important performance is in the legitimacy of a state, the more important instrumental rationality will be in the political thinking and behavior patterns of the population of

that state (Zhao 2020). Instead of previous studies that consider legitimacy as a single independent variable, State legitimacy is treated here also as an interactive independent variable capable of explaining other secondary mechanisms, such as state capacity , one of the most widely discussed state capacity variable[5]. I will argue how state capacity, which is the ability of this government to achieve policy goals, is subject to interference from regime legitimacy and ultimately how this will all lead to a different Zero COVID policy pattern.

Second, I will start with a temporal narrative to analyze how the information received by countries with different positive and negative feedback influences policy implementation. Three temporal turning points will be focused on: first is the timing of the first local patients in each country and the prompt government response. The second is the domestic ZC policy performance during the Delta outbreak. The last one is when and how the government implemented the transition policy during the spread of the Omicron variant. The differences in the feedback given to the state by these contingencies will likely change the structural constraints on state behavior under given conditions. The countries examined in the study were divided into Group A (Australia, New Zealand) and Group B (China, Vietnam). The article aims first to

[5]   Social trust is another widely studied independent variable It was not included here because it is difficult to conduct comparative studies. Scholars commonly use surveys across multiple countries such as the World Values Survey or Global Barometer Surveys, but large-scale comparisons are not easy due to vocabulary sensitivity and differential conceptual understanding (Zhao 2017). For example, authoritarian countries such as China and Vietnam have been known to have higher support rates than European and American democracies, which has generated a lot of discussion among political scientists. In a recent paper, "Decoding Political Trust in China: A Machine Learning Analysis," Lianjiang notes that when the survey uses a more granular set of indicators to fully measure trust in all five levels of government, the more local the government, the lower the trust index is given by the public. When the survey only collects the public's perceptions of the Chinese government, the public tacitly assumes that it refers to the central government and gives it a very high rating (Li 2022). For those government departments that deal with specific matters at the township level, trust will slip to only 20 percent. Since the specific institutions and cultural connotations to which words refer differ from one language and culture to another, the transferability of these measures and surveys is at risk in cross-cultural comparative studies. Also, if more appropriate surveys could be used in general, then the legitimacy of the Chinese government would likely decline significantly.

answer the question of why the sample countries had several different structural conditions but still followed the similarly strict ZC policy, including a state of emergency, strict control of international arrivals, lockdown, mass tracking, war-mobilization-like propaganda, and encouragement of civilian reporting, but subsequently adopt two different patterns of ZC termination policies?

V Responses in the early stages of the outbreak in each country

After January 20, 2020, the first Covid patients appeared outside of Hubei in China, South Korea, and Vietnam in quick succession. While countries were still reacting, the Chinese government decided on February 23 2020 to impose a sudden lockdown on Wuhan, a large city with a population of 11 million. However, this was already four weeks after Covid was first reported to the government. The Covid outbreak was first reported to the Centers for Disease Control on Dec. 27 as a case of "pneumonia of unknown origin," but much information about the specific symptoms and hazards was stifled by the government (Yang 2020).

When the Wuhan pandemic began, the Chinese government's poor performance drew criticism from both domestic and international sources (Liu 2020). Among them, Dr. Li Wenliang received significant attention when he was admonished by local police for discussing the new disease with his friends in a WeChat group(Ma and Mai 2020). After Li Wenliang's sudden death from Covid infection, he became a symbol in China's public opinion war. The Chinese Communist Party tried to make him a martyr within the party(Bostock 2020), while dissidents saw Li as a victim of persecution by the authoritarian and police state(Nie 2020). Academic voices in response to the Chinese government's belated response to the virus fall into two categories: the first point the finger at the polity for policy decisions; the second blame the lag in the government's response on a general dilemma of the decision-making process.

Criticisms against the polity focus on the rigid institutional construction of government. Jurist Zhang Qianfan, for example, argues that the disaster of the epidemic came from the fact that the National People's Congress (NPC) members, who were the legislative committee, were neither elected by the public nor dared to hold the government accountable so the government irresponsibly missed the best prevention and control period(Zhang 2020). Not coincidentally, sociologist Zhou Xueguang argues that China's bureaucracy is only capable of campaign-style governance, such as lockdown, but not of gathering information from below or at the margins(Zhou 2020). These rigid institutional criticisms dominated for a time in the early days of the epidemic. Many in the media called the Wuhan pandemic China's Chornobyl to suggest the failure of the regime (Feng 2020).

The second academic voice is a pragmatic analysis of the dilemma of decision-making under deep uncertainty. Covid is a new epidemic. It is unknown how harmful it is to society and whether it is worthy of full containment (Zhao 2020). Any radical decision by the government, such as the lockdown of a city, would create extremely serious consequences while failing to adopt any strategy would be criticized as a failure of responsibility(Wang 2020). This structural factor has led to a general dilemma of decision failure in the early stages of the Chinese government.

It is worth noting that the second voice did not enter the public sphere until May 2020. Previous mainstream opinion had been directed at criticism of China's governance incompetence. However, to the surprise of many dissidents, in the post-February, the city of Wuhan had been hailed as the best performer in subsequent analyses of how the various countries responded to the pandemic, while many democratic countries, once seen as more efficient, have lagged

extraordinarily behind in epidemic control(Crossley 2020). To explain this, regime legitimacy and information feedback need to be brought into the discussion.

Legitimacy is the foundation for state governance to be recognized by the masses. Dingxin Zhao proposes three ideal types of legitimacy based on Weber's theory: procedural legitimacy, ideological legitimacy, and performance legitimacy(Zhao 2017). Since China lacks a procedural basis for power change and an ontological ideology, the emphasis on performance legitimacy becomes paramount. Over the past thirty years, the performance of economic growth and the provision of public goods has played a major role in the Communist Party's governing agenda. During the initial stages of the epidemic, China was blamed from all directions for being the site of the virus outbreak. A large amount of negative feedback raised the central government's concern about the epidemic. Criticism of the polity in particular was desperate to allow good performance to assert its authority. At the same time, a series of experts, represented by Li Lanjuan and Zhong Nanshan advised that the lockdown of Wuhan was necessary to contain the spread of the virus (Xie 2020, Feng 2020). Therefore, the authorities decisively chose and strictly enforced the lockdown until March 25 when the majority of Hubei was in Zero Covid condition, and April 8 for Wuhan.

In contrast to the other countries, Vietnam in Group B, another controlled post-communist regime, followed a similar path. Performance legitimacy plays a major role in everyday governance. By February 13th, Vietnam had already sealed off parts of the country where Covid-infected people were present. This was the first time in the world, other than China, that a city was on lockdown for COVID. The army, officials, and commune cadres were mobilized to guard the area day and night (Huy 2020). Until April 1, Vietnam, with a population of nearly 100 million, still had only 218 patients, but with the international outbreak of the

pandemic, a fifteen-day-long national lockdown was enforced anyway(Sun 2021). This has kept the number of infections in Vietnam extremely low.

In Group A, Australia and New Zealand, two stable democracies, were not challenged from the realm of legitimacy, but still implemented an effective lockdown strategy. From 2020 to September 2021, the Social Trust Index for these two countries remains high and has not experienced even a short-term significant decline[6]. This is because the first cases of these two countries appeared on March 4th and February 28th, 2020, respectively. The island features bought time for state decision-making[7]. By that time, the pandemic had become a common international occurrence, and the Covid crisis was no longer seen as a tragedy caused by a failure of decision-making in authoritarian countries such as China, but as a general threat to all countries of the world. Lockdowns became the norm in March. The lag of the first pandemic outbreak and such negative information feedback prompted the New Zealand and Australian governments to avoid going through an early decision dilemma and order national lockdowns on March 21 and March 20. By the end of May, both countries had moved into a de facto zero Covid state and continued to maintain it.

VI **The Shock of Delta and the Diverged of State Policy**

The epidemic has reached a new phase starting in June 2021. The new variant of the delta virus since late 2020 is more infectious and relatively less damaging. By June 2021, the delta has spread worldwide and is posing a challenge to Zero COVID countries(Callaway 2021). During

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[6]Social trust is data that needs to be used with caution (cf. footnote 3). The reference countries for Australia and New Zealand here are English-speaking countries and other developed countries in Western Europe. They have more of their political culture in common to ensure comparability. They are 54 and 58.4 respectively, while the other countries are the United States 39.7, Spain 19, France 18.7, United Kingdom 46, Germany 45, and Italy 28.3 (Inglehart 2022).

[7] Not all island nations have enjoyed the advantages afforded by geographic spacing. Japan and Taiwan, for example, have close economic ties with mainland China, so much so that their first cases of infection were extremely early, with its being on Jan. 15 and Jan. 21, respectively.

this period, China continued its hard-line Zero COVID policy, Vietnam declared its Zero COVID policy unsustainable during the September outbreak, and Australia and New Zealand put policy transitions on the agenda in July and October, respectively. To explain the variability shown by these initial cases of excellent performance in the face of Delta, it is first necessary to conclude the implementation of the zero policy in each country.

I. Lockdown: Lockdown is a policy that almost all Zero COVID countries are guaranteed to adopt. A lockdown requires the state to convince its citizens to accept very drastic measures, including the shutdown of all schools, public facilities, private businesses, etc., except for emergencies. States, to varying degrees, authorize law enforcement to enter homes and other premises without a warrant to enforce lockdown restrictions (Fu 2020). Lockdowns may be accused of brutality, but in terms of interrupting the spread of the covid to contain the pandemic, it is the most effective instrument. China during the epidemic adopted grid-based governance measures at the grassroots level of society, such as lockdown of cities, household surveys, and quarantine of residents (Wei 2020). Grid-based governance seeks to divide the social base into multiple grids of responsibility and accordingly embed affairs, organizations, and people into specific grids. Sealing off the city is not just about closing off the public sphere; communities (local self-governance entities) are also given great power as an outgrowth of base-level government organizations (Zhang 2022). Community agents would be in charge of inspection and information reporting at the entrance and exit of each neighborhood. In many areas, residents are not allowed to go anywhere but their homes.

In the case of China alone, the lockdown may be seen as a special case of an authoritarian state, but in New Zealand, Australia, and Vietnam, which are all zero-Covid countries, the lockdown is just as brutal. Vietnam implemented a two-week nationwide lockdown starting on

April 1, 2020. During this period, individuals were forbidden to leave their homes except for basic needs, such as emergency medical care and purchasing supplies. Mandatory lockdown then quickly became the government policy favored to stop the spread of Covid (Nguyen 2021). In Australia and New Zealand, the highest level of alert was also a mandatory city lockdown, closing all but essential facilities.

II. Tracing: Successful quarantine relies on prompt contact tracing of confirmed cases. In terms of preventing the spread, ideally, the government would be able to track the historical travel and contacts of the infected person to lock down the area and quarantine the population to the greatest extent possible. This relies on a strong state capacity to dominate information technology, the cession of citizens' privacy rights, and pervasive digital technology. China monitors the history of every individual who comes into public places with the information provided by commonly installed apps such as WeChat and Alipay and mobile service providers, as well as nucleic acid testing records (Fu 2020). Once the record shows that an individual has passed through a medium-risk city or potential exposure within two weeks, their health code will show a yellow alert and they will be banned from public places. Once the code is red, the corresponding centralized quarantine measures are triggered.

In Vietnam, public surveillance systems also attempt to track every individual, but many places rely on manual tracking and proactive reporting due to the lack of smartphones and big data penetration among people over 45. The real-time location of Facebook or Instagram will be used by the Vietnamese government as additional tracking data. An even larger group of offline cadres and volunteers are responsible for collecting and reporting data on the mobile population (Lewis,2020).

In democratic countries, the use of these tracking policies occurs, but is by no means widespread, due to privacy concerns. In New Zealand, in advance of the pandemic outbreak, the Digital Health Strategy Framework has defined new ways to manage the epidemic. In March 2020, the National Contact Tracking System (NCTS) was issued to record individuals identified as either COVID cases, close contacts, or incidental contacts (Lips 2022). In addition, New Zealand is promoting vaccine passes to restrict access to public places for at-risk populations as Zero COVID moves into the transition policy (Cook 2021). However, the promptness and universality of the New Zealand tracking system remain limited. In the late 2020 pandemic, only 41% of close contacts were quarantined within 96 hours, and 28% of cases were not recorded by NCTS at all (Sonder 2023).

In Australia, the South Australian State government uses facial recognition software to monitor quarantined populations (O'Neil 20221). Another proximity-tracking application called COVIDSafe is being rolled out nationwide. As in New Zealand, the use of these tracking apps is not mandatory. Infected people who falsely report or under-report are not subject to any disciplinary action, or even moral censure. The utility of the software is minimal. In the second half of 2020, more than 25,300 close contacts were identified in New South Wales, Australia. Of these, only 205 were included in the close contact population as a result of user-initiated reporting (Vogt 2023).

III. Ideological mobilization: The war metaphor is widely used by Zero Covid State in its ideological propaganda. In both China and Vietnam, various war terms such as "wartime state," "wartime measures," "death squads," and "people's war" are constantly circulated in the media and even on the Internet to express concerns about strong measures (Qin 2020, Bonito 2022). These slogans are not only applicable to the authoritarian countries in Group B. but also to New

Zealand and Australia, where slogans for fighting Covid-19 are frequently seen. In the April 25, 2020 lockdown, New Zealand President Ardern reinforced patriotic sentiments by comparing the lockdown to the Gallipoli campaign of 1915, which was the first time New Zealand was drawn into a mass war (Beattie 2021).

The second common ideological mobilization comes mainly from Group B countries. The media in China and Vietnam made a big deal out of promoting the success of Zero Covid as a special path for their regimes(Beattie 2021). China, in particular, constructed a dichotomy between Zero Covid State and Non-Zero Covid State. Those countries that did not insist on Zero Covid were accused of being irresponsible and " lying flat" with disregard for people's lives.

IV. Vaccines and medical supplies: Vaccinations are the emerging way to protect countries from epidemics starting in the late 2020s. China insists on self-reliance in vaccine development and vaccination. When the vaccine was introduced, regulators limited its use to people aged 18-59 years, which contributed to doubts about its safety among older people and delayed the introduction of booster shots (Stevenson 2022). In Vietnam, while the vaccine was developed on its own, the government also received significant support from other countries. Mixing of different Covid vaccines is also a common occurrence when supplies are limited (Nga 2021). Australia and New Zealand import their vaccines mainly from Pfizer and BioNTech. Vaccination follows a systematic national program, starting with healthcare workers and the military, then moving to the elderly population, and then to other vulnerable people (COVID-19 vaccine rollout plan 2021, four-phase roadmap 2021).

The above comparison of policy implementation reveals differences in the independent variables that the sample countries must examine. The sources of regime legitimacy respond to three different patterns of political thinking and behavior, which are instrumental rationality,

value rationality, and formal rationality. In practical contexts, these patterns can be measured by specific policy arrangements and implementation.

Table 4: Legitimacy concerning political thinking and behavior patterns

Source of State Legitimacy	Political thinking and behavior patterns
Ideology	Value rationality
Procedures	Formal rationality
Performance	Instrumental rationality

All Zero COVID countries have a claim to legitimacy from performance. The divergence of state policies depends on whether they rely more on procedures or ideology (as shown in Table 5). Tracking and lockdown reflect the sufficiency of the State's capacity to respond to the rising tide of the delta, However, formal rationality can constrain certain state capacities. In New Zealand and Australia, the inefficiency of tracking is due to democratic institutions and the protection of personal privacy that prevent real-time tracking of phone applications. New Zealand and Australia did not experience major pandemics during the Delta period, but there were more small outbreaks than in China and Vietnam. As more contagious variants emerge, the governments from type A realized the high costs of implementing these policies, in both political and economic terms. Increasingly, voices of reason are suggesting that the Zero COVID policy should move toward a period of transition. Zero Covid condition is not the end of the fight against Covid but buys time for universal vaccination and medical supply. Both countries have drawn up national plans to establish transition policies for almost a year-long period, from universal access to vaccines to gradual liberalization of social regulation.

In Vietnam, the government was unable to track down close exposures along with strict enforcement of the city lockdown policy due to an inherent lack of state capacity. In the August 2021 Delta outbreak, the Vietnamese government declared the failure of its ZC policy after a three-month prolonged lockdown, forcing the state to abandon control at the peak of mortality. neither group B country, Vietnam nor the Chinese government, anticipated the sudden policy shift in advance, leaving medical supplies and vaccine rollouts unprepared. In contrast to procedural legitimacy in which both authoritarian states lacked popular participation in the election of political representatives, politicians resorted to good governance and ideology, such as nationalism, for their legitimacy. Ideological propaganda was not uncommon during the COVID period; they mobilized the will of the masses to fight the epidemic and legitimated the expansion of state power during the epidemic, but both type B countries went too far. They rendered the Zero COVID policy as a confrontation between their nationalism and the other competitive countries. Such declaration of high-value rationality hindered the practice of instrumental rationality in policy making. This problem will become more pronounced in China during the Omicron phase. In China, the delta wave did not cause a huge change. Strong state capacity effectively curbed the spread of the epidemic, with only a thousand or so people infected with delta. On the other hand, the highly ideological approach to the epidemic silenced Non-ZC voices and prevented China from preparing a transitional policy for ending ZC policy.

Table 5: Regime Legitimacy and Sample Countries

	A		B	
Legitimacy	New Zealand	Australia	China	Vietnam
Ideology			✔	✔

Procedure	✔	✔		
Performance	✔	✔	✔	✔

Ⅶ Omicron and the End of Zero Policy

Omicron is a new variant of Covid that mutated in India in mid-November 2021. omicron causes less severe disease than delta, but omicron is more contagious (Das 2022). In just over four weeks, it has replaced delta as the most common variant of covid-19 worldwide. The best-performing countries in the past few years, except for China, were all amid a Covid pandemic in January 2022 while beginning to move toward de-containment. Countries are responding to the rising number of cases by requiring only home quarantine for those infected with Covid (Callaway 2021). The lockdown was only implemented for a small number of specific targets. By the summer, countries had fully deregulated their societies after a year of transitional policies.

China, on the other hand, went in the opposite direction. In March, the megalopolis of Shanghai, which is at the center of the Chinese economy, was on lockdown. Once again, the Chinese government demonstrated its strong state capacity. Three months later, Shanghai returned to a zero-virus state and declared an end to the lockdown. This sudden and forceful policy brought the legitimacy of China's performance into widespread question. Despite China's strong enforcement power, it raised public fears of economic depression and individual freedom (Bloomberg 2022). While the world was returning to normalcy, only China was still implementing layers of preventive and control policies. A large number of affluent people started to migrate to Singapore, or other countries (Yu 2022). The fight against the epidemic was more of an ideological campaign than a technical challenge in China at the time. Many cities of several million people show just one or two cases of infection before going into weeks of city lockdown

and economic shutdown (Pearson 2022). While the central government indulges in its ideological propaganda, local officials try to extend their political lives by exaggerating policy implementation to show their allegiance to the nationalist ideology behind the Zero COVID policy.

In November, the Chinese government issued " The Twenty Measures to Optimize Prevention and Control". Only then did China begin to ease its containment measures, although there was a certain amount of restriction in some areas as the number of infected people increased rapidly (Haenle 2022). This hesitancy eventually provoked protests spread across the country in response. Many people are already suffering from the prolonged economic shutdown and city lockdown. When the 2022 World Cup began, many Chinese citizens were shocked that foreigners could walk around freely without masks while they were confined to their homes. This side of the protest was initially led by Foxconn workers in Henan, and soon university students and citizens joined in (Haenle 2022). At that time, the Chinese government encountered challenges to the legitimacy of both ideology and performance. Amidst the protests, the Chinese government issued a new "The Tenth Measure" on December 7 announcing the removal of most of the epidemic prevention restrictions(Huang 2022). The three-year-long Zero Covid policy came to an abrupt end in a sudden event for which there was no prior preparation.

Delta and then Omicron should not be considered contingencies at the time of events. The general evolutionary direction of viruses has been toward greater spread, longer recovery periods, and lower virulence to gain a competitive advantage (King 2021). If the virus kills the host quickly, then long-term transmission and survival becomes no longer possible. Based on this evolutionary trend, it can be learned that initially tough Zero COVID policies can contain variants with high lethality and low transmission rates, and as Tables 1-4 reveal, the tougher the

policy implementation, the less the formal rationality is taken into account, the fewer death rates rise in the countries. This dominance fuels nationalism in Group B countries. Exaggerated and dualistic propaganda is everywhere. Increasingly, governments shifted the legitimization of their policies from instrumental rationality to ideological self-justification, such as the superiority of Asian cultures, or propaganda about the inferiority of others, such as the lack of state capacity in democracies.

As the new variants continued to emerge, the advantage of the curve reversed between the two groups. The increasing number of small outbreaks suggests that the contagiousness of COVID pushes the limits of the state's ability to block and track it. Group A countries have recognized this trend and have chosen to transition to "living with the virus". Group B countries have already engaged in too much ideological discourse to justify their legitimacy, and rapid policy shifts can make their propaganda look awkward. In this case, Group B chose to stick with the strong policies of the past until COVID inevitably outgrew the state's ability to control it.

Ⅷ Conclusion

The three-year epidemic has had numerous negative effects on human lives, economies, and social relations worldwide. In terms of safeguarding life, Zero Covid countries have generally achieved better results. However, the unsustainability of Zero Covid dictates that epidemic prevention policies should be flexible. When covid is extremely harmful, a ZC policy can be used to contain transmission and buy time for vaccine uptake. As highly transmissible variants of Covid, such as Omicron, become more prevalent, it becomes increasingly urgent to gradually deregulate society and respond actively to the pandemic.

This paper examines the patterns of transition into and end of zero covid policies in four countries that performed well in the early stages of the epidemic: China, Vietnam, Australia, and

New Zealand. The optimal solution for an epidemic policy depends on a dynamic balance between the ZC strategy and the COVID lethality. In the early stages, when the virus is weakly transmissible and highly lethal, ZC is certainly the best means of safeguarding life. The pattern of high lethality did not last. As new variants of COVID mutate and spread beyond the capacity of the State to control, the lethality of COVID will decline day by day. In this case, Zero COVID policies should be phased out, and routine medical care should replace extreme measures such as the lockdown of cities. In terms of cost of lives, New Zealand best performed Zero Covid policies without any outbreaks before transition policy implementation, Australia followed, Vietnam exited Zero Covid too early, and China was too late.

Through comparative analysis, this study identifies regime legitimacy as a core independent variable and explains the impact of legitimacy on this measure of state capacity. Authoritarian states such as Vietnam and China lack the procedures legitimacy and ontological ideology to justify their dominance model, so they rely more on performance to defend their legitimacy in the early stage. New Zealand and Australia, as democracies, do not have a pressing crisis of legitimacy, but the nature of island nations buys them extra time to get information about the epidemic from other developed countries. This freed them from the decision dilemma of unknown unknowns and facilitated the practice of their Zero Covid policy.

Although all countries rely to some extent on performance to make the case for their political order, the greatest divergence between the two groups of countries in the late period is whether to emphasize ideology or procedural rationality. In Group A, procedural legitimacy in Australia and New Zealand hinders the effectiveness of real-time tracking, but sound multiple legitimacy guarantees rational decision-making during the ZC period and preparation for the ensuing transition. In Group B, the resort to ideological legitimacy makes policy-making more

irrational and fails to accurately anticipate the unsustainability of the Zero COVID policy. As a result, Group B countries had to suspend the Zero COVID policy at the peak of the pandemic and suffered significant live losses.

State capacity is a double-edged sword. Vietnam, with insufficient state capacity, had to abandon the Zero Covid policy without any preparation. China, with its extremely strong state capacity, on the other hand, relied on powerful measures and delayed preparing a transition plan, even at a much heavier cost. The Chinese government was overly confident in its ability to execute without receiving negative feedback to reflect on its Zero Covid path. So much so that the vast majority of people became infected with covid after the abrupt termination of the Zero Covid policy in December, resulting in the deaths of nearly a million people.

Table 6: State Capacity and the Time Point

	China	Vietnam
State Capacity	Strong	Not Strong
Time point for ending the Zero-COVID policy	Too Late	Too Early

An epidemic is first and foremost a scientific and technical problem, and instrumental rationality guarantees a country's rational policy arrangements to minimize the threat posed by a pandemic. Countries with high instrumental rationality, such as Type A Countries, can plan more long-term for an organized ending from the Zero Covid policy. In type B countries, where ideologization of Zero Covid dominates the later policy paths, the less instrumental rationality there is.

While these structural independent variables and information feedback may seem complex, the lesson the research is trying to make is simple: in a state that is focused on

justifying its legitimacy with ideologization, the value judgment of that state's policies becomes stronger and instrumental rationality becomes weaker. Thus, the stronger the state's capacity is, the greater the consequences of its irrational behavior.

Bibliography

Adamecz-Volgyi, A and Szabo-Morvai, A, (2021) Confidence in Public Institutions is Critical in Containing the COVID-19 Pandemic. Available at SSRN: https://ssrn.com/abstract=3867690 or http://dx.doi.org/10.2139/ssrn.3867690

Beattie, A., Priestley, R. (2021) Fighting COVID-19 with the team of 5 million: Aotearoa New Zealand government communication during the 2020 lockdown, Social Sciences & Humanities Open, Volume 4, Issue 1.

Bollyky, T.J. et al. (2022) Pandemic preparedness and covid-19: An exploratory analysis of infection and fatality rates, and contextual factors associated with preparedness in 177 countries, from Jan 1, 2020, to Sept 30, 2021, The Lancet. Elsevier. Available at: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00172-6/fulltext#seccestitle 170 (Accessed: January 25, 2023).

Bostock, B. (2020) China declared whistleblower doctor Li Wenliang a "martyr" following a local campaign to silence him for speaking out about the coronavirus. *Business Insider*, April 3.

Berengaut, A. A. (2020, March 6). *Democracies are better at fighting outbreaks*. The Atlantic. Retrieved April 30, 2023, from https://www.theatlantic.com/ideas/archive/2020/02/why-democracies-are-better-fighting-outbreaks/606976/

Bloomberg. (2022, August 31). *Shanghai's two-month covid lockdown is still rippling through the economy*. Bloomberg.com. Retrieved March 4, 2023, from https://www.bloomberg.com/news/articles/2022-08-31/shanghai-s-two-month-lockdown-is-still-rippling-through-economy?leadSource=uverify+wall

Cai, J., Deng, X., Yang, J. *et al.* (2022) Modeling transmission of SARS-CoV-2 Omicron in China. *Nat Med* 28, 1468–1475. https://doi.org/10.1038/s41591-022-01855-7

Cepaluni, G., Dorsch, M. T., & Branyiczki, R. (2022). Political regimes and deaths in the early stages of the COVID-19 pandemic, *Journal of Public Finance and Public Choice*, *37*(1), 27-53. Retrieved Feb 28, 2023, from https://bristoluniversitypressdigital.com/view/journals/jpfpc/37/1/article-p27.xml

Crossley, G. (2020, January 23). *Wuhan Lockdown 'unprecedented', shows commitment to contain virus: Who representative in China*. Reuters. Retrieved March 2, 2023, from https://www.reuters.com/article/us-china-health-who-idUSKBN1ZM1G9

Cooke, H (22 November 2021). "Covid-19: New Zealand to enter traffic-light system on December 3, opening up Auckland".

Callaway, E. (2021, June 22). *Delta coronavirus variant: Scientists brace for impact*. Nature News. Retrieved March 3, 2023, from https://www.nature.com/articles/d41586-021-01696-3

COVID-19 vaccine rollout plan. 19. (2021, March 10). Retrieved March 3, 2023, from https://covid19.govt.nz/news-and-data/latest-news/covid-19-vaccine-rollout-plan/

Das, S., Samanta, S., Banerjee, J., Pal, A., Giri, B., Kar, S. S., & Dash, S. K. (2022). Is Omicron the end of the pandemic or the start of new innings? *Travel medicine and infectious disease*, *48*, 102332. https://doi.org/10.1016/j.tmaid.2022.102332

Do Benoit, H., & Benoit, B. (2022). A cultural reading of the public management of the Covid-19 crisis in Vietnam. *Gestion et Management Public*, *9–4*(4), 23–28. https://doi-org.proxy.uchicago.edu/10.3917/gmp.094.0023

Doan, H. T. (2022). The Public Health Response to COVID-19 in Vietnam: Decentralization and Human Rights. *Asian Bioethics Review*, 1–21. https://doi-org.proxy.uchicago.edu/10.1007/s41649-022-00226-1

Dyer O. Covid-19: China stops counting cases as models predict a million or more deaths *BMJ* 2023; 380:p2 doi:10.1136/bmj.p2

Dinh, P. L., & Ho, T. T. (2020). How a collectivistic society won the first battle against COVID-19: Vietnam and their "weapons." Inter-Asia Cultural Studies, 21(4), 506–520. https://doi-org.proxy.uchicago.edu/10.1080/14649373.2020.1831811

Fukuyama F. (2020, March). The thing that determines a country's resistance to the coronavirus. The Atlantic.
Fu, Y., Ma, W., & Wu, J. (2020). Fostering Voluntary Compliance in the COVID-19 Pandemic: An Analytical Framework of Information Disclosure. *The American Review of Public Administration*, *50*(6–7), 685–691. https://doi.org/10.1177/0275074020942102

Feng, E. (2020, April 15). *Meet dr. Zhong Nanshan, the public face of the COVID-19 fight in China*. NPR. Retrieved March 1, 2023, from https://www.npr.org/2020/04/15/835308147/meet-dr-zhong-nanshan-the-public-face-of-the-covid-19-fight-in-china

Frey. C & Chen.C. (2020) Democracy, culture, and contagion: Political regimes and countries... Oxford Martin School. (n.d.). Retrieved April 30, 2023, from

https://www.oxfordmartin.ox.ac.uk/publications/democracy-culture-and-contagion-political-regi
mes-and-countries-responsiveness-to-covid-19/

Guardian News and Media. (2021, July 30). *Scott Morrison has announced an updated
four‑phase roadmap out of Covid with vaccination rate triggers*. The Guardian.

Haenle, P. (2022.). *China's Zero Covid policy is a double-edged sword*. Retrieved March 5, 2023,
from
https://carnegieendowment.org/2022/12/01/china-s-zero-covid-policy-is-double-edged-sword-pu
b-88535

Hossain, A. D. (2022). *Effectiveness evaluation of digital contact tracing for covid-19 in new ...*
The Lancet. Vol 3. P259-273.
https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(22)00010-X/fulltext

Huy Thanh; Nguyễn Hưởng; Văn Duẩn (3 March 2020). "Trong "tâm dịch" Sơn Lôi trước giờ G
dỡ bỏ lệnh phong tỏa, cách ly". Người lao động

Hoang, V. (2022). The COVID-19 pandemic in Vietnam - success, crisis, and endemic: Key
thresholds and lessons. Journal of Global Health, 12, 03065.
https://doi-org.proxy.uchicago.edu/10.7189/jogh.12.03065

Huang, K. (n.d.). *Did China's street protests end harsh COVID policies?* Council on Foreign

Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P.
Norris, E. Ponarin & B. Puranen (eds.). 2022. World Values Survey: All Rounds -
Country-Pooled Datafile. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA
Secretariat. Dataset Version 4.0. doi:10.14281/18241.17

Relations. Retrieved March 4, 2023, from
https://www.cfr.org/blog/did-chinas-street-protests-end-harsh-covid-policies

Huynh, D., Tosun, M. S., & Yilmaz, S. (2020). All‑of‑government response to the COVID‑19
pandemic: The case of Vietnam. Public Administration & Development, 40(4), 236–239.
https://doi-org.proxy.uchicago.edu/10.1002/pad.1893

Jamieson, T. (2020). "Go Hard, Go Early": Preliminary Lessons From New Zealand's Response
to COVID-19. *The American Review of Public Administration*, *50*(6–7), 598–605.
https://doi.org/10.1177/0275074020941721

Kreulen, K., de Bruin, B., Ghorbani, A., Mellema, R., Kammler, C., Vanhee, L., Dignum, F., &
Dignum, V. (2022). How Culture Influences Individual Behavior During a Pandemic: A Social

Simulation of the COVID-19 Crisis. Journal of Artificial Societies & Social Simulation, 25(3), 1–47. https://doi-org.proxy.uchicago.edu/10.18564/jasss.4877

Keil, R. Harrison, P. Ren, X. (2022, October 12). *How covid-19 lockdown measures - and their outcomes - varied in cities around the world*. The Conversation. Retrieved March 21, 2023, from https://theconversation.com/how-covid-19-lockdown-measures-and-their-outcomes-varied-in-cities-around-the-world-184682

King A. (2021) The coronavirus could end up mild like a common cold. New Sci.249(3318):12-13. doi: 10.1016/S0262-4079(21)00084-1. Epub 2021 Jan 22. PMID: 33519006; PMCID: PMC7825868.

Lewis, D. (2020, December 14). *Why many countries failed at COVID contact-tracing - but some got it right*. Nature News. https://www.nature.com/articles/d41586-020-03518-4

Li, Z., Chen, Q., Feng, L., Rodewald, L., Xia, Y., Yu, H., Zhang, R., An, Z., Yin, W., Chen, W., Qin, Y., Peng, Z., Zhang, T., Ni, D., Cui, J., Wang, Q., Yang, X., Zhang, M., Ren, X., Wu, D., … China CDC COVID-19 Emergency Response Strategy Team (2020). Active case finding with case management: the key to tackling the COVID-19 pandemic. *Lancet (London, England)*, *396*(10243), 63–70. https://doi.org/10.1016/S0140-6736(20)31278-2

Liu, JC. (2020) "From social drama to political performance: China's multi-front combat with the Covid-19 epidemic." Critical Asian Studies 52, no. 4: 473-493.

Li, L. (2022). Decoding Political Trust in China: A Machine Learning Analysis. The China Quarterly, 249, 1-20. doi:10.1017/S0305741021001077

Leung, K, Leung, G. M, Wu, J. "Modeling the adjustment of COVID-19 response and exit from dynamic zero-COVID in China. " (preprint) doi: https://doi.org/10.1101/2022.12.14.22283460

Lips M, Eppel E. Understanding public service provision using digital technologies during COVID-19 lockdowns in New Zealand through a complexity theory lens. Global Public Policy and Governance. November 2022:1-20.

Le Thi Ngoc Diep, & Nguyen Le Uyen Diem. (2021). Behavior Culture with the COVID-19 Pandemic in Vietnam and the Republic of Korea. *Journal of Global and Area Studies(JGA)*, *5*(2), 99. https://doi-org.proxy.uchicago.edu/10.31720/JGA.5.2.5

Mei, CQ. (2020) "Policy style, consistency and the effectiveness of the policy mix in China's fight against COVID-19." *Policy and Society* 39, no. 3: 309-325.

Ma, J., and J. Mai. (2020). Death of coronavirus doctor Li Wenliang becomes catalyst for "freedom of speech" demands in China. *South China Morning Post*, February 7.

Migdal, J. (2001). State in Society: Studying How States and Societies Transform and Constitute One Another (Cambridge Studies in Comparative Politics). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511613067

Matthewman, S., & Huppatz, K. (2020). Sociology of Covid-19. Journal of Sociology, 56(4), 675–683. https://doi.org/10.1177/1440783320939416

Nga, L. (2021, October 18). *Cho Phép Tiêm trộn vaccine moderna và pfizer*. vnexpress.net. Retrieved March 3, 2023, from https://vnexpress.net/cho-phep-tiem-tron-vaccine-moderna-va-pfizer-4353426.html

Nguyen, T. V., Dai Tran, Q., Phan, L. T., Vu, L. N., Truong, D. T. T., Truong, H. C., Le, T. N., Vien, L. D. K., Nguyen, T. V., Luong, Q. C., & Pham, Q. D. (2021). In the interest of public safety: Rapid response to the COVID-19 epidemic in Vietnam. *BMJ Global Health*, *6*(1), e004100. https://doi.org/10.1136/bmjgh-2020-004100

Nie, JB., Elliott, C. Humiliating Whistle-Blowers: Li Wenliang, the Response to Covid-19, and the Call for a Decent Society. *Bioethical Inquiry* 17, 543–547 (2020).

Oliu-Barton, M., Pradelski, B. S. R., Aghion, P., Artus, P., Kickbusch, I., Lazarus, J. V., Sridhar, D., & Vanderslott, S. (2021). SARS-CoV-2 elimination, not mitigation, creates the best outcomes for health, the economy, and civil liberties. *Lancet (London, England)*, *397*(10291), 2234–2236. https://doi.org/10.1016/S0140-6736(21)00978-8.

O'Neil, Tyler (2 September 2021). "Australia debuts 'Orwellian' new app using facial recognition, geolocation to enforce quarantine". Fox News

PARKER, R. W. (2021). Why America's Response to the Covid-19 Pandemic Failed: Lessons from New Zealand's Success. Administrative Law Review, 73(1), 77–103.

Person. (2022, November 3). *Factbox: What is China's Zero-covid policy and how does it work?* Reuters. https://www.reuters.com/world/china/what-is-chinas-zero-covid-policy-how-does-it-work-2022-11-03/

Qin, H. (2020) Metaphors are fine, but you can't really treat epidemic prevention as war. Financial Times.

Stevenson, A., & Wang, O. (2022, December 12). *'it doesn't hurt at all': In China's New Covid Strategy, vaccines matter*. The New York Times. Retrieved March 3, 2023, from https://www.nytimes.com/2022/12/12/business/china-covid-zero-vaccines.html?_ga=2.3726260. 549203289.1677865108-792716514.1669592763

Szreter S Woolcock M. Health by association? Social capital, social theory, and the political economy of public health. Int J Epidemiol. 2004; 33: 650-667.

Safi, M.Guardian News and Media. (2020, March 22). *Coronavirus: Italy bans any movement inside the countrythe as toll nears 5,500*. The Guardian. Retrieved February 27, 2023, from https://www.theguardian.com/world/2020/mar/22/italian-pm-warns-of-worst-crisis-since-ww2-as-coronavirus-deaths-leap-by-almost-800

Sonder, G. J. (2023). *The August 2020 COVID-19 outbreak in Aotearoa, New Zealand: Delayed contact tracing for Pacific people contributes to widening health disparities*. IJID Regions.Vol 6. Pages 177-183 https://www.sciencedirect.com/science/article/pii/S2772707623000140#sec0010

Steytler, Nico. (2022) Comparative Federalism and Covid-19 : Combating the Pandemic. Routledge. Accessed January 25, 2023.

Soutphommasane T, Stears. (2020) M. Fear of freedom and political culture during COVID-19. Monash Bioethics Review. June:1-10. doi:10.1007/s40592-022-00157-5

Tan AC. (2020) Solving the Collective Action Problem Taiwan, New Zealand, and the COVID-19 Battle. Taiwan Journal of Democracy. 16(2):79-99. Accessed January 25, 2023. https://search-ebscohost-com.proxy.uchicago.edu/login.aspx?direct=true&db=poh&AN=148607 925&site=eds-live&scope=site

Trinh, D. H., McKinn, S., Nguyen, A. T., Fox, G. J., Nguyen, A. T., & Bernays, S. (2022). Uneven stigma loads: Community interpretations of public health policies, 'evidence' and inequities in shaping Covid-19 stigma in Vietnam. *SSM - Population Health*, *20*. https://doi-org.proxy.uchicago.edu/10.1016/j.ssmph.2022.101270.

Vogt, F. (2023). Effectiveness evaluation of digital contact tracing for covid-19 in new New South Wales, Australia. VOLUME 7, ISSUE 3, E250-E258https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(22)00010-X/fulltext

Vu, V. T. (2021). Public Trust in Government and Compliance with Policy during COVID-19 Pandemic: Empirical Evidence from Vietnam. Public Organization Review: A Global Journal, 21(4), 779–796. https://doi-org.proxy.uchicago.edu/10.1007/s11115-021-00566-w

Wang, SG. (2020) Decision-making under deep uncertainty - evidence from the Covid Pneumonia Epidemic. Economic Herald. May Issue.

Wei, Y. (2020). *COVID-19 prevention and control in China: grid governance* . Academic.oup.com. https://academic.oup.com/jpubhealth/article/43/1/76/5911705?login=true

Weber, M. Economy and Society. Two Volumes. 2013. Berkeley: University of California Press.

World Health Organization. (n.d.). *14.9 million excess deaths associated with the COVID-19 pandemic in 2020 and 2021*. World Health Organization. Retrieved March 21, 2023, from https://www.who.int/news/item/05-05-2022-14.9-million-excess-deaths-were-associated-with-the-covid-19-pandemic-in-2020-and-2021

Xie, Echo. Guardian News and Media. (2020, March 22). *Coronavirus: Italy bans any movement inside the country as the toll nears 5,500*—the Guardian. Retrieved February 27, 2023, from https://www.theguardian.com/world/2020/mar/22/italian-pm-warns-of-worst-crisis-since-ww2-as-coronavirus-deaths-leap-by-almost-800

Yu, S. (2022, April 18). *'voting with their feet': China's wealthy look to leave after Shanghai lockdown*. Subscribe to read | Financial Times. Retrieved March 4, 2023, from https://www.ft.com/content/5f505cf6-4b2f-4f0e-8f74-128db1f01d9a

Ye, JH. "Is China's emergency management system resilient against the COVID-19 pandemic?." *Management and Organization Review* 16, no. 5: 991-995.

Yan, B., Zhang, XM., Wu., L Zhu, H., and Chen, B. (2020) "Why do countries respond differently to COVID-19? A comparative study of Sweden, China, France, and Japan." The American Review of Public Administration 50, no. 6-7: 762-769.

Yang, Dali. (2020) "Wuhan Officials tried to cover up covid-19–and sent it careening outward," Washington Post. https://www.washingtonpost.com/politics/2020/03/10/wuhan-officials-tried-cover-up-covid-19-sent-it-careening-outward/

Yi-Hui Christine Huang, Jun Li, Ruoheng Liu, & Yinuo Liu. (2022). Go for zero tolerance: Cultural values, trust, and acceptance of zero-COVID policy in two Chinese societies. Frontiers in Psychology, 13, 1–13. https://doi-org.proxy.uchicago.edu/10.3389/fpsyg.2022.1047486

Zhou, Xueguang. (2020) "Organizational response to COVID-19 crisis: Reflections on the Chinese bureaucracy and its resilience." *Management and Organization Review* 16, no. 3: 473-484.

Zhao, Dingxin. (2017) The Politics of Legitimacy: State and Social Relations in Contemporary China. National Taiwan University Press.

Zhao, Dingxin. (2020) The Covid Epidemic and China's Reforms. Beijing Cultural Review, No. 4: 69-77.

Zhao, Dingxin. (2023) Deduction and Sociology: The Use and Development of Ideal-Type Set Method[J].Annual Review of Sociology, 11(1): 18-38.

Zhang, Qianfan. (2020) To Prevent Viruses, China Needs Constitutional Democracy, New York Times.

Zhang, T. (2023, March 30). *For China's urban residents, the party-state is closer than ever*. ChinaFile.
https://www.chinafile.com/reporting-opinion/notes-chinafile/chinas-urban-residents-party-state-closer-ever