

The Economic Consequences of the Epidemic: Preliminary Forecasts of China's Economic Response to the Epidemic's End based on China

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ABSTRACT

The article's main purpose is to explore several implications that the current COVID-19 epidemic may have on the world and economy. Using the Black Death in Europe in the 14th century and the SARS pandemic in 2003 as examples, hypothesize about the disease's potential consequences. The COVID-19 epidemic is more virulent and difficult to contain, high transmission, long latency, low lethality, and high care, these four characteristics has penetrated the most developed countries' health-defense systems. China, as the world's second-largest economy and the country that has recovered the most quickly from the epidemic, will serve as the research framework for this article. The service industry has been hit the hardest by the epidemic, and the service industry accounts for the majority of GDP in developed countries. The epidemic will have a significant negative impact on the vitality of developed countries. After the outbreak, the research has led to speculation that China might end decades of US global leading position.

Keywords: COVID-19, Economics, SARS, Epidemic

1. INTRODUCTION

1.1 Background

Humans assume they have beaten other species by mastering instruments and collaborating on a bigger scale to govern the Earth, however bacteria and viruses have eluded us for 200000 years. This time, The COVID-19, with high transmission, long latency, low lethality, and high care, these four characteristics has penetrated the most developed countries' health-defense systems, producing worldwide panic and mayhem. The chain reaction has never happened before.

1.2 Related research

Pástor and Vorsatz stated that During the COVID-19 crisis in 2020 investigated the performance and flows of mutual funds. find that even the most active funds underperform the passive benchmark. The fact that investors are still concerned about sustainability amid this severe crisis demonstrates that they see it as a need rather than a luxury item [1]. Badar Examine how the stock market has reacted to COVID-19. Using data on daily COVID-19 confirmed cases and deaths, as well as

stock market returns from 64 countries, researchers discovered that stock markets react negatively to an increase in COVID-19 confirmed cases and that stock market returns decrease as the number of confirmed cases in a country rises [2]. Steven and Tim analyse that as human societies have progressed, the global economic impact of epidemics has been far less than it once was. The economic impact of current epidemics is usually less than expected, due to the extraordinary resilience of human societies and the adoption of strategies to manage fear effectively and keep economies stable [3]. Fan states that Short-term economic growth has been severely hampered by SARS. Although serious, it will only have a short-term impact on economic growth. Its long-term impact is heavily reliant on governments' ability to quickly implement effective public health policies [4]. Xing and Tian review the economic effects of acute and chronic epidemics on human and social development from an economic perspective and synthesize the implementation effects of public intervention policies on epidemics, such as centralized treatment, cutting of transmission channels, and information disclosure [5]. Zhang et al. stated that the virus wreaked havoc on financial markets on a never-before-seen scale. The current findings show that the pandemic has increased

global financial market risks significantly. Individual stock market reactions are linked to the severity of the outbreak in each country. Unconventional policy interventions, such as the United States' unlimited quantitative easing, will increase uncertainty and may result in long-term problems. Furthermore, countries have not worked together to address these issues. This global trend of social disintegration poses a greater threat than the virus [6]. Liu et al. SARS-CoV-2 is highly infectious, susceptible, and can cause significant sickness or death, making it a public health risk. Simultaneously, governments all around the globe must collaborate to battle COVID-19 to minimize hospital stays and medical resource consumption. Humans must be prepared for the next disease outbreak [7]. Hanna, analysis shows that after China has recovered from the epidemic, the economy will enter a phase of compensatory development, with economic growth following a V-shaped pattern [8]. Chen and Guo stated that on the demand side, the impact on the economy in the short term is greater than the SARS epidemic in 2003. Although the epidemic's impact on total economic demand will be restored in the short term, the global epidemic's impact on China's imports and exports, as well as the global industrial chain, will be felt for some time. It will take longer for China's total demand to recover [9]. Schindler et al. stated that the ongoing competition between China and the United States is influenced by the Covid-19 pandemic. Both the US and China must adapt their global development policies to meet the broad "bottom-up" requirements. China is a desirable development partner for many countries, but the sustainability of its leadership is contingent on the United States. Elections, and whether it will be able to support the "Belt and Road" initiative in the future [10].

1.3 Objective

This article will compare various aspects of the Black Death in Europe in the 14th century and the SARS epidemic in 2003 to determine and estimate the impact of this epidemic, and concentrate on the study of the Black Death's positive effects on post-pandemic society: the Renaissance, the Industrial Revolution, the birth of capitalism, and the maritime colonization era. The impact of this epidemic is without a doubt unprecedented, its characteristics of high transmission, long latency, low lethality, and high care directly penetrate developed country medical protection systems, emphasizing to humans the importance of vigorously developing life sciences and preventive measures.

2. PREVIOUS PANDEMICS' ECONOMIC IMPACT

2.1 the Pestilence

The 1440s and 50s were an era of enormous misery

for Europe. Between 1347 and 1353, the "Black Death" spread over Europe, killing 25 million people, or one-third of the entire European population at the time.

The Black Death pandemic directly killed nearly half of Europe's population, and it became the most significant impediment to European population growth for the next three centuries [11]. The Black Death originated in Central Asia and moved to the Crimean Peninsula along the Silk Road in 1343. As a result of the ongoing warfare, trade routes have become increasingly extensive, the Yersinia bacterium-carrying mice arrived in and it start to raging the whole Europe. Depending on the state of the European health and medical development at the time, the Black Death's fatality rate in Europe ranged from 30 to 95 percent.

As shown in Figure 1. It came up with a solution after consulting many documents and discovered that the long Black Death was directly responsible for a series of chain reactions that occurred in European society: the Renaissance, the rise of the textile industry, the disintegration of the manor economy, and the emergence of capitalism, etc. It also influenced the industrial revolution in the 18th century, either directly or indirectly. So that "Pestilence" was also known as "Vicious Circle Turned into Lucky Ring" by later generations [12].

As Figure 1. Shows, as the most obvious consequence of the Black Death, a rise in population mortality has directly led to a severe fall in social labor supply. A movement in labor supply will result in a change in the equilibrium pay level, according to labor supply and demand theory. Researchers estimated that in the 200 years from 1500 to 1700, the average per capita income in Western Europe increased by about 30%.

Basically, the Black Death promoted commercial advancements. The two most fundamental economic concepts are supply and demand. In Figure2. Develops an analytical framework for commercial advancements based on new supply and new demand. On the one hand, the Black Death caused a sharp decline in Europe's population and it led to labor shortage, so people began to adopt new technologies to save manpower, and the increase in efficiency enabled farmers to obtain higher incomes, resulting in a rise in the savings rate and increased savings, and capital accumulation strengthened technology investment, this cycle directly led to the opening of a lasting supply revolution in Europe from the 15th to the 17th centuries. The epidemic, on the other hand, shattered religion's absolute authority, people began to realize that God was untrustworthy, and it was better to trust themselves instead. As a result, individual consciousness began to emerge, The Renaissance aided in the awakening of individual consciousness and resulted in a significant increase in demand for textiles, industrial products, food, trade, and other goods. The Black Death's new supply and demand generated a

virtuous loop of European growth. It gradually overtook China to become the world's economic leader for the next

three centuries. This is known as the 'Great Divergence,' [12].

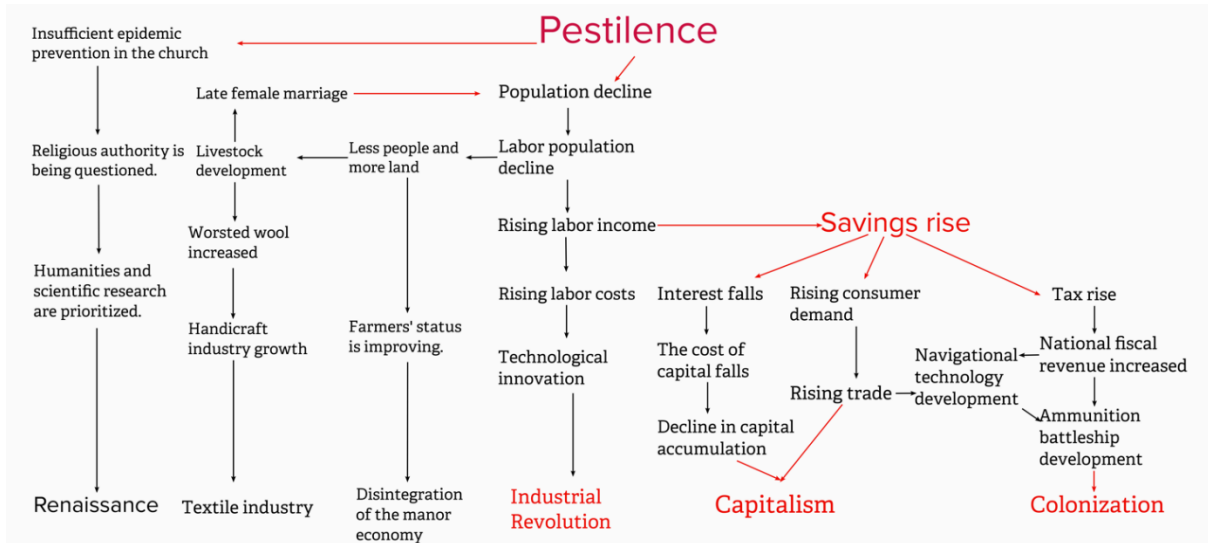


Figure 1. The pestilence set off a series of chain reactions.

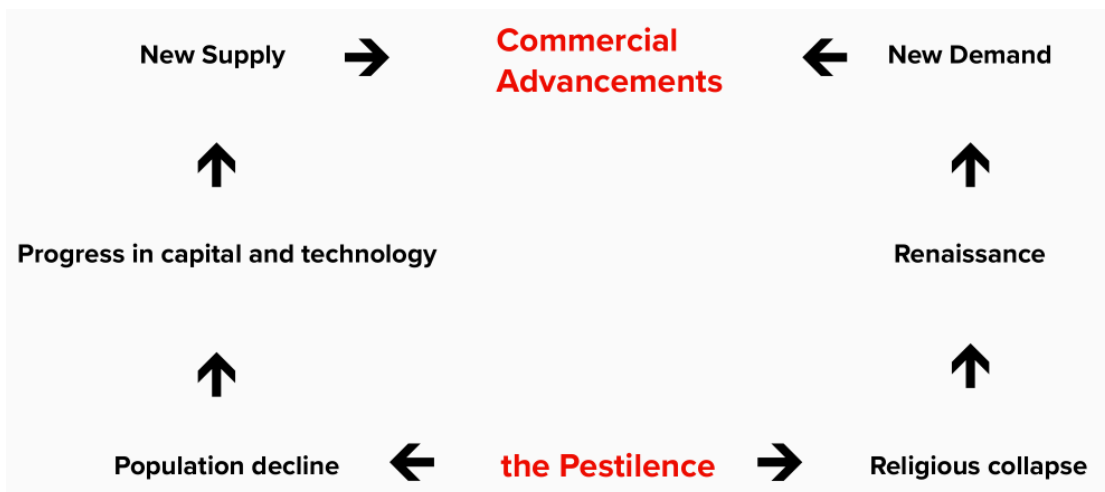


Figure 2. The cycle of how pestilence led to commercial advancement

2.2 Severe Acute Respiratory Syndrome (SARS)

The SARS-associated coronavirus causes a viral respiratory disease known as Severe acute respiratory syndrome (SARS). It was first discovered at the end of February 2003 during a Chinese outbreak that spread to four other countries [4] SARS has the greatest economic impact on the four East Asian economies with the largest number of suspected cases: China, Hong Kong, Taiwan (China), and Singapore. The primary source of economic impacts in these economies was large, though short-lived, negative demand shocks induced by individuals' efforts to avoid becoming infected, resulting in steep reductions in foreign and domestic tourism, as well as reduced domestic traffic for service sectors such as retail stores, hotels, restaurants, and transportation [13].

A significant drop in GDP growth will result in significant income and output losses. Under the two scenarios, the estimated income loss for East and Southeast Asia as a whole range from US\$12.3-28.4 billion. China's GDP fell by over 5% on a seasonally adjusted annualized basis in the second quarter of 2003, resulting in a loss of roughly 0.5 percent of GDP for the year [14]. similar demand-side effects on tourism and other service sectors in Hong Kong resulting in the second quarter of 2003, GDP fell by 10.5 percent at a seasonally adjusted annualized rate, compared to the preceding quarter. a 43 percent loss in services exports (mainly tourism) and a 7.9% dip in resident personal spending drove the fall (both at quarter on quarter, seasonally adjusted annual rates) [15].

3. HOW COVID-19 CHANGE THE WORLD

3.1 The outbreak

humans believe that other species have been beaten by mastering equipment and partnering on a wider scale to govern the Earth, yet microbes and viruses have eluded us after 200000 years. Viruses cause organ mutilation and death in our physical bodies and virus pressure on production and fear in people's hearts in the economic field.

This time, the epidemic is more virulent and difficult to contain. Multiple records have been broken because of this epidemic: Since the Spanish flu, this is the world's largest epidemic; It resulted in the worst economic downturn since the Great Depression of the 1930s; It resulted in the largest drop in oil prices since OPEC's inception; It aided the world's largest central bank intervention in history, and for the first time in a month, 89-year-old Buffett has witnessed his countless firsts. High transmission, long latency, low lethality, and high care. These four characteristics have penetrated the most developed countries' health-defense systems. Even the most advanced countries can only use isolation now. As a result, the entire world is isolated [7].

3.2 The epidemic's current situation

Currently, the virus has evolved into a variety of mutations so far, at the end of 2020, Alpha--spread quickly, and by the first half of 2021, it had become the most common mutant strain. Beta--highly infectious, with a strong ability to evade the immune system; The most serious threat to the epidemic in South America is gamma; Delta is the most contagious. On November 26, 2021, WHO identified the variation B.1.1.529, also known as Omicron, as a variant of concern, which is the most recent mutant.

According to the most up-to-date information from Johns Hopkins University in the United States, the number of newly diagnosed cases in the United States on December 30, 2021, was 647,000, breaking the record for the newest cases in a single day for the second time. On December 28 of last year, the US Centers for Disease Control and Prevention released data showing that the Omicron strain infection was responsible for 58.6 percent of new cases nationwide in the previous week. Infections with the Omicron strain account for up to 90% of cases on the east coast of the United States.

The number of confirmed epidemic cases in different nations is connected to their economic development: countries with greater per capita GDP have more confirmed cases per million people. There are three plausible reasons for this, according to the research: 1. In relatively developed economies, people's mobility is usually higher, and the degree of internationalization is also higher, making infection and epidemic spread more

likely; 2. In some economically developed countries, the population aging rate is relatively high. Coronavirus infection is more common among the elderly, as a result, the number of confirmed cases in these nations has risen.; 3. In underdeveloped nations, the healthcare system is often behind the times, with limited capability for large-scale viral testing, resulting in a small number of confirmed cases [16].

Faced with the spread of the epidemic, many countries have further tightened epidemic prevention and restriction ways to stop the virus from spreading. Many European countries have adjusted their anti-epidemic policies. The Italian government has further tightened restrictions, including banning public gatherings on New Year's Eve, and all entertainment venues will be closed until January 31, 2022. People must wear masks outdoors, and higher levels of protection are required in indoor places such as theaters and stadiums. The French Ministry of the Interior has decided to implement some new epidemic prevention measures from January 3, including requiring companies to allow employees to work at home for at least 3 days a week, etc.; Belgium closes theaters and concert halls, prohibits indoor gatherings, and restricts the number of shoppers. ; Spain Catalonia and other 8 autonomous regions have successively decided to re-implement the curfew policy or close nightlife venues; Finland recently began to require inbound passengers to produce a negative Nucleic acid amplification testing certificate.

3.3 Impact on economy

Only four things in human history have been able to reconstruct an entire society in a short time frame:1. Technological revolution 2. Plague 3. War 4. Famine revolution. Our society is currently undergoing a plague as well as a technological revolution. Only the Black Death in Europe in the fourteenth century can be compared to this epidemic [12].

The service industry has the greatest negative economic impact from this epidemic, and the service industry is the most important thing in the modern economy [17]. The more developed a country is, the more reliant it is on the service sector. In 2021, China's service industry accounts for more than half of the country's GDP, while service industries in the United Kingdom, the United States, France, and Germany account for 70 percent to 80 percent. This also demonstrates that the more developed countries are more severely affected by the epidemic [18].

The epidemic's impact on the global economy can be called The Third World War, and its true strength lies in the fact that it lasted long enough to bring about major societal changes. In the exponential function, there is an inflection point effect, Simply put, after a sufficient amount of time has passed, a certain exponential change

will cross the inflection point, transitioning from a 'quantitative' to a 'qualitative' change, also known as a 'phase transition' in physics. Currently, it appears that the epidemic's scope is large enough and long enough to cause a global phase shift. Mark Twain once said: "History doesn't repeat itself, but it does rhyme". It is difficult to say whether this change is negative, but the epidemic has resulted in significant changes in people's lifestyles.

4. ANALYZE THE ECONOMIC DEVELOPMENT SITUATION IN CHINA FOLLOWING THE OUTBREAK.

China, as the world's second-largest economy and the country that has recovered the most quickly from the epidemic, will serve as the research framework for this article. In comparison to the Black Death in Europe in the 14th century, Europe counterattacked China became the leader of the world, and it is being speculated whether this epidemic will provide China with an opportunity to counterattack the US and become a global leader.

4.1 China's current economic situation and Industry development forecast

The article will then examine the opportunities and challenges presented by the epidemic to a variety of industries, including finance, consumer retail, Medical, and biotechnology, as well as the industry's future development prospects [19].

4.1.1 financial services industry

4.1.1.1 Credit to SMEs is being expanded.

China currently has around 46 million businesses, with over 35 million small and micro businesses contributing more than half of the country's tax revenue, which account for more than 60% of GDP and 80% of labor employment, When the economy is bad, SMEs suffer the most, and the pressure on them is the Chinese economy's pressure.

As a result, the Chinese government intends to ease the burden on small and micro businesses in 2022, with one of the keywords being tax reduction. At the government level, there are fewer taxes and fees, and at the bank level, there is more assistance. To create an environment in which small and micro-businesses can thrive.

4.1.1.2 Digital Transformation Accelerates

Regulators have stressed the necessity of strengthening online business services and instructing firms and citizens on how to conduct financial transactions utilizing online technologies such as the Internet and mobile applications since the emergence of

the pandemic. New fintech-based business models, as well as the transformation of bank branches, are projected to continue to emerge and play an active role.

4.1.1.3 Digital operation, online and offline integration and transformation

After resuming work after the 2021 Spring Festival, public funds and most securities companies handle more than 90% of their business through online channels, and the company's transactions and customer service have been largely unaffected by the epidemic. The off-site transaction and service trend has been bolstered, accelerating the integration and transformation of online and offline functions, as well as the transformation of physical business outlets' functions. The industry actively promotes the use of off-site technical means such as face recognition to improve business management and application of digitalization, while also encouraging more compliant handling of high-risk businesses, laying a solid foundation for digital operation and digital supervision.

4.1.1.4 China's insurance market has huge potential for future development

China's insurance depth and density lag considerably behind those of industrialized countries. There is a lot of opportunity for expansion in the insurance market, especially as per capita GDP rises and national insurance awareness rises, the number of people who purchase insurance is expected to grow.

4.1.2 Retail industry

4.1.2.1 Short-term revenue and profit setback

The pandemic has had a direct impact on brick-and-mortar retail sales. Catering, shopping malls, department shops, supermarkets, luxury stores, movies, and travel have all closed, disrupting the experiential consumption categories of fashion, luxury items, and alcohol, as well as conventional supermarkets and convenience stores. Although shops and street stores stay open to provide people's basic requirements, traffic is fast falling, fixed operational costs such as labor, rent, and inventory are prevalent, and bank loan interest payments will put pressure on cash flow turnover, resulting in a steep decline in operating profitability. The company's survival is in jeopardy.

4.1.2.2 Differentiation is accelerated by the competitive environment.

As a result of the pandemic, retailers are shifting even more to the internet while carefully diminishing their offline base to boost overall performance and efficiency. High-margin sectors and organizations that have launched internet enterprises ahead of time will perform

better. Customers, skills, shops, suppliers, and other resources will be stolen from small, medium, and micro enterprises by strong brands and major platforms looking to grow market share.

4.1.2.3 Unmanned retail explores opportunities

During the epidemic, attempts at unmanned self-pickup, robot delivery, and unmanned retail stores broke through the psychological barriers to delivery and receipt. Schools and other areas where huge people assemble for lengthy periods can be a useful service platform for express delivery and takeout delivery services, cutting the cost of last-mile delivery operations, and lowering supply chain expenses, automatic picking shelves, automatic conveying equipment, and other similar systems are examples of different techniques. With the large-scale integration of the supply chain, the scale advantage will surely increase storage efficiency and service quality. Simultaneously, quickly growing digital technologies like artificial intelligence, the Internet of Things, and big data are actively seeking application scenarios in unmanned retail terminal and back-end operation development, the digital revolution will quicken.

4.1.3 Medical and biotechnology industry

4.1.3.1 R&D of innovative drugs and medical devices is strengthened

As a result of the outbreak, the development of numerous associated medications and reagents for viral detection, suppression, and therapy will surely attract increasing attention, as will the public's use of products such as influenza vaccines. As a result, more pharmaceutical companies are expected to invest in R&D and manufacturing innovative drugs and medical devices.

4.1.3.2 The rapid development of Internet medical care

As a result of the pandemic, online diagnosis, internet hospitals and treatment, and other online pharmacies have gotten a lot of attention, and the government, industry, and general public now have a better grasp of developing channels. As a result, new diagnosis, and treatment platforms, medication distribution options such as online hospitals and pharmacies will be better utilized and enhanced in the future.

4.1.3.3 Health management and health awareness-raising

After the pandemic has gone, the population will have a higher need for health management and care, resulting

in increased medical consumption. As a result of the pandemic, the public's knowledge of linked respiratory and infectious illnesses has increased dramatically. Knowledge about illness prevention, early medical therapy, treatment techniques and medications, disease prognosis, and damage, among other things, have all been valuable to disease prevention. In particular, the selling of household preventative items (home disinfection, personal protection).

4.2 PERSPECTIVES ON THE CHINESE ECONOMY

From both external and internal perspectives, the world may continue to be chaotic in 2022, while China will emphasize stability. There are numerous reasons for the world's chaos. There are four clear reasons for this: Confrontation is the first. The English-speaking countries appear to have come to an agreement that China will be the first competitor [20]. This has become the most significant underlying cause of the future global disorder. The epidemic is the second, unlike SARS in the past, the new coronavirus does not go away on its own. It lasted far longer than anyone expected. Omicron, the new mutant virus, is extremely dangerous, but it may not be the end of the story. Inflation is the third factor. The United States' inflation rate has reached 6.8%, the highest in 40 years, while Mexico's is 7.4%, Brazil's is 10.7%, Turkey's is 21.3 percent, Argentina's is 51.2 percent, and Venezuela's is 1575 percent. Inflation, it can be said, is robbing the world's poor and middle class, increasing the gap between rich and poor, and causing social unrest [21]. As a result, the Fed will be forced to raise interest rates, but with another midterm election in 2022, the entire adjustment process will become very tangled. The military is the fourth. The Russian-Ukrainian border is rattling, and the US, Russia, Ukraine, and Europe are all in a tangle. On the other hand, the Iranian nuclear issue and China's Taiwan Strait dispute remain unresolved, raising the risk of global and regional conflict.

Faced with a chaotic world, China chose chaos first, followed by governance. China will undergo surgery in 2021 to remove the hidden dangers that are impeding future development. In 2022, China will mend its wounds and work to restore the vitality of its economy in the coming years.

"Stability" was mentioned 25 times in the Communist Party of China's draft of the Central Economic Work Conference for 2022 on 2021 December 10. Its central theme is prosperity for all. "To attain the aim of national prosperity, we must first make the "cake" bigger and better by uniting the entire country's people in a common effort, and then divide it fairly." says one sentence in the draft. "Rich" comes first, followed by "common" in terms of common prosperity.

To put it bluntly, China is not wealthy enough at the moment, and China government must continue to

channel the vitality of businesses and capital to the appropriate destinations. Only when businesses have faith in the future will they expand production, giving residents better jobs and more money to spend. Only then will capital be more willing to invest in businesses, and a virtuous circle can be formed [22].

5. CONCLUSION

COVID-19's global influence is discussed in this article. particularly China, using the Black Death in the 14th century and the SARS epidemic in 2003 as examples. According to the study, China, a developing country with 1.4 billion people, is one of the countries in the world least affected by the epidemic, its response to the epidemic has been swifter and more forceful than that of other developed nations.

A new country has emerged from a new epoch. The country's life cycle will come to an end once this epoch has passed. For example, the Spanish Empire arose from the Age of Navigation and carried out its mission until the Age of Navigation ended and the Great Geographical Discovery was completed. The colonial movement gave birth to the British Empire, and when the colonial era ends, "the empire on which the sun never sets" will face its sunset. When World War II erupted on the Eurasian continent, the United States, as a fisherman, took advantage of the battle between the snipe and the clam by selling weapons for both sides and establishing hegemony for decades after the war.

In recent years, tensions between the United States and China have risen., and the Covid-19 outbreak has further heightened their rivalry. If maintained, China's improved public health response and economic recovery will bolster its position as a global development leader.

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