The Blue Paper on Cross-Strait Relations - 2021







China Cross-Strait Academy Ltd

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Preface

The China Cross-Strait Academy (Hong Kong) is a non-governmental research institution dedicated to observing and studying the development of Cross-Strait relations with the concept of "strait focus and global outlook". In May 2021, the Academy officially released the "Report on Cross-Strait Relations Risk Index", which employs event data analysis, the mainstream empirical research method in international relations and area studies, to investigate the evolution of Cross-Strait relations as well as identify and evaluate the risk factors.

Examining the Cross-Strait relations with index, indeed, has its limitations since the events will only be investigated when they meet the indicators of index. It means some events might not be taken into consideration because they are not covered by the indicators even if they are essential to the relations. For instance, since May 2021 the new round of COVID-19 pandemic has aroused a series of relative events concerning pandemic prevention and vaccines. However, those events have not been included in the index because there are no applicable indicators to build a model.

To remedy the limitations of the index evaluation system and improve the research results, the Academy decided to compile and release the "Blue Paper on Cross-Strait Relations". The blue paper will review, analyze, and summarize the influential events of Cross-Strait relations by year, seeking a more comprehensive understanding of the relations.

1. Political Dimension

1.1 Timeline of Cross-Strait political events in 2021

On January 5, the China's mainland (hereafter as "the mainland") published a revised edition of the "Communist Party of China (CPC) United Front Work Regulations", adding the narratives including "developing and strengthening Taiwan's patriotic reunification force, opposing Taiwan's secessionist activities", and "continuing to promote peace in the motherland for the process of reunification". It clearly emphasized uniting Taiwan compatriots at home and abroad, while deleting the content of "consolidating and deepening the political, economic, cultural and social foundations of the peaceful development of Cross-Strait relations". The media believes that compared with last edition, the new one shows a stronger attitude as a response to the deterioration of Cross-Strait relations in 2020. ¹

On January 10, the mainland issued the "Plan to Build the Rule of Law in China (2020-2025)", which mentioned a "One Country, Two Systems" plan for Taiwan to advance the process of peaceful reunification for the first time. It advocated promoting the achievement of institutionalized Cross-Strait arrangements on peaceful development, suggesting that the mainland still stuck to the policies of "Peaceful Reunification" and "One Country, Two Systems", but at the implementation level, it has been switching from broad framework to concrete policies.

On January 11, the Taiwan authorities released an updated version of "passport". Compared with the last version, the new one retains the Chinese character "Republic of China" as its "country name" while changing its English translation from "Republic of China" to "Taiwan" with enlarged font. The Taiwan authorities claimed that the changes aim to avoid confusion between "Taiwanese" and "Chinese" by foreign entry and exit administrations. It can be considered as a trick to promote "formal Taiwan independence", intended to further construct Taiwan's "national identity" and cut off Taiwan's bonds with the mainland.³

On February 4, Chiu Chui-cheng, the Deputy Minister of Taiwan's Mainland Affairs Council stated that Taiwan is not a part of the People's Republic of China, and "the Republic of China is a sovereign state".⁴

On February 10, the United States (the US) pharmaceutical company Modena announced that it had signed an agreement with Taiwan to provide 5 million doses of COVID-19 vaccines. The mainland has said that it can provide Taiwan with vaccines and Taiwan's former leader Ma Ying-jeou called for not rejecting the mainland's vaccines. On February 14, Chen Shihchung, the head of Taiwan's Central Epidemic Command Center (CECC), claimed that the mainland vaccines had not been included in the candidate list by then. ⁵ At the same time,

https://www.dw.com/zh/%E5%8F%B0%E6%B9%BE%E6%99%BA%E5%BA%93%E5%BF%A7%E5%BF%83%E5%88%B6%E8%84%91%E6%9D%83-

[%]E4%B8%AD%E5%9B%BD%E4%BF%AE%E8%AE%A2%E7%BB%9F%E6%88%98%E6%9D%A1%E4%BE%8B/a-56144626

² https://www.bbc.com/zhongwen/simp/chinese-news-55675464

³ https://cn.nytimes.com/asia-pacific/20210112/taiwan-new-passport/

⁴ https://www.rti.org.tw/news/view/id/2091033

 $^{^{5}\} https://www.voachinese.com/a/CECC-head-says-Chinese-inoculations-are-not-an-option-for-Taiwan-not-an-option-for-an-op$

Taiwan was seeking to purchase 5 million doses of vaccines from German pharmaceutical company BNT. On February 17, media reported that the purchase negotiation was on the edge of collapse because of "outside forces intervention", but afterwards BNT stated that it would provide Taiwan with vaccines. ⁶

On February 15, the Taiwan authorities announced a new round of "constitutional reform". On February 24, Taiwan Affairs Office of the State Council expressed its firm opposition to Taiwan's "constitutional reform".

On February 23, Chiu Tai-san, the minister of Taiwan's Mainland Affairs Council stated that Taiwan people cannot accept the mainland's intention to equate the "1992 Consensus" with the "One Country, Two Systems" policy, which resulted in the stalemate of Cross-Strait relations. Ma Xiaoguang, the mainland's director of Taiwan Affairs Office of the State Council criticized Chiu Tai-san "deliberately distorting and grafting". 8

On March 7, Chinese Foreign Minister Wang Yi reiterated the "One-China Principle" at the press conference of the National People's Congress (NPC) and the National Committee of the Chinese People's Political Consultative Conference (CPPCC), pointing out that the mainland and Taiwan must be unified. The spokesperson of Taiwan Ministry of Foreign Affairs Joanne Ou said that Taiwan is not a part of the People's Republic of China, and "the Republic of China is a sovereign state". ⁹

On March 25, Taiwan's Mainland Affairs Council published the latest poll, showing that 74.9% Taiwan people did not agree with the "1992 Consensus" and the "One-China policy", 88.2% opposed that the mainland achieves unification with "One Country, Two Systems", 85.8% supported "maintaining the status quo in a broad sense", and around 75% thought that the Taiwan authorities should have dialogue with the mainland under the principle of "equal dignity". ¹⁰

May 20 marks the 5th anniversary of Tsai Ing-wen's administration. Tsai believes that one of her achievements in the past five years is to reduce the economic dependence on the mainland, "not lock Taiwan in China".¹¹

Taiwan's COVID-19 pandemic broke out in mid-May, breaking its positive image of an "pandemic control model student". The mainland's pharmaceutical company Fosun Pharma has a cooperative relationship with BNT. It expressed the intention to provide Taiwan with vaccines. On May 26, Tsai Ing-wen blamed China for blocking Taiwan's purchase of vaccines

20210215/5778872.html

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https://www.rfi.fr/cn/%E4%B8%93%E6%A0%8F%E6%A3%80%E7%B4%A2/%E5%8F%B0%E5%8C%97%E4%B8%80%E5%91%A8/20210219-

%E5%8F%B0%E6%B9%BE%E5%90%91%E5%BE%B7%E5%9B%BD%E9%87%87%E8%B4%ADbnt%E7%96%AB%E8%8B%97%E6%9A%97%E6%BD%AE%E6%B1%B9%E6%B6%8C

https://www.dw.com/zh/%E6%B0%91%E8%B0%83%E8%BF%91%E4%B9%9D%E6%88%90%E5%8F%B0%E6%B9%BE%E6%B0%91%E4%BC%97%E5%8F%8D%E5%AF%B9%E4%B8%80%E5%9B%BD%E4%B8%A4%E5%88%B6/a-57003082

⁷ http://www.xinhuanet.com/tw/2021-02/24/c_1127134009.htm

⁸ https://www.voachinese.com/a/China-gave-cold-shoulder-to-Taiwan-s-calls-for-dialogue-20210224/5790770.html

 $^{^9\,\}text{https://www.voachinese.com/a/Taiwan-tells-CCP-to-accept-Taiwan-strait-reality-20210309/5807434.html}_{10}$

¹¹https://newtalk.tw/news/view/2021-05-20/576733

from BNT German factory. 12

The controversy of Taipei Economic and Cultural Office (TECO) in Hong Kong. Taiwan set up a representative office of TECO in Hong Kong. Since July 2018, Hong Kong requested Taiwan staff to sign "the commitment of the One-China principle" required for visa renewals. In June 2021, most Taiwan staff had to leave Hong Kong because they were not able to renew their visa for refusing to sign the commitment. On June 21, Chiu Tai-san criticized the "unreasonable suppression" of the Hong Kong government. He claimed that TECO Hong Kong will not be canceled and the service "will not be stained" due to staff loss. ¹³

On July 1, CPC held a commemoration of the Party's 100th funding anniversary. When talking about the Taiwan issue, the Secretary General Xi Jinping emphasized that "solving Taiwan issue and realizing national reunification are the unswerving historical task of the CPC and the common vision of all Chinese people". Xi promised to adhere to "1992 Consensus" and promote "peaceful reunification", while stating to "resolutely smash any 'Taiwan independence' attempt". ¹⁴ He also emphasized that "no one should underestimate the strong determination, firm will, and strong ability of the Chinese people to defend national sovereignty and territorial integrity". ¹⁵

On July 2, Taiwan's Minister of Foreign Affairs criticized China as an "authoritarian country" and claimed Taiwan as a "democratic country". "The future of Taiwan can only be decided by Taiwanese people." ¹⁶ At the end of July, the mainland's Henan province was hit by a rainstorm disaster, killing over 300 people. Tsai Ing-wen expressed condolences to the affected area. ¹⁷

In mid-August, the situation in Afghanistan changed dramatically, triggering the dispute over the "credibility of Taiwan-US relations" in Taiwan. After the withdrawal of the US army, the Republic government collapsed, and the Taliban took power. Tsai Ing-wen addressed her opinion on the Afghanistan situation, stating that "the only choice of Taiwan is to make itself stronger, more united, and more determined to protect itself". ¹⁸ On August 17, Chiu Chuicheng expressed that Taiwan is not Afghanistan and will not be. Taiwan will "resolutely consolidate sovereignty and democratic institutions". ¹⁹ On August 19, US president Joe Biden claimed that the US will protect Taiwan, followed by Taiwan authorities' gratitude on August 20. ²⁰

On August 27, the Taiwan authorities passed the budget for the following year. The defense

https://www.dwnews.com/%E5%8F%B0%E6%B9%BE/60249372/%E5%8F%B0%E5%A4%96%E9%95%BF%E6%8E%A5%E5%8F%97%E6%B3%95%E5%AA%92%E4%B8%93%E8%AE%BF%E5%BC%BA%E8%B0%83%E5%8F%B0%E6%B9%BE%E6%9C%AA%E6%9D%A5%E7%94%B1%E5%8F%B0%E6%B9%BE%E4%BA%BA%E5%86%B3%E5%AE%9A 17 https://www.rfi.fr/cn/%E6%94%BF%E6%B2%BB/20210721-

%E5%8F%B0%E6%B9%BE%E6%80%BB%E7%BB%9F%E8%94%A1%E8%8B%B1%E6%96%87%E5%B0%B1%E5%A4%A7%E9%99%86%E9%83%91%E5%B7%9E%E6%9A%B4%E9%9B%A8%E7%81%BE%E6%83%85%E8%A1%A8%E8%BE%BE%E6%85%B0%E9%97%AE%E5%96%84%E6%84%8F

¹² https://www.voachinese.com/a/Tsai-blames-China-for-blocking-vaccine-20210526/5905070.html

¹³ https://www.bbc.com/zhongwen/trad/chinese-news-57551355

 $^{^{14}\} https://www.voachinese.com/a/china-s-xi-pledges-reunification-with-taiwan-on-party-s-birthday/5949343.html$

 $^{^{15}}$ https://www.rfa.org/mandarin/yataibaodao/zhengzhi/hcm0701a-07012021050113.html 16

 $^{^{18}\,}https://www.voachinese.com/a/President-Tsai-calls-for-stronger-Taiwan-in-response-to-Afghanistan-comparisons-20210818/6007331.html$

¹⁹ https://www.rfa.org/mandarin/yataibaodao/gangtai/jt-08172021111040.html

 $^{^{20}\,}https://www.voachinese.com/a/Taiwan-president-thanks-Biden-for-rock-solid-support-amid-China-threats-20210820/6009987.html$

budget reached NT\$372.6 billion, with a year-on-year increase of 3%, which is the highest amount in history.²¹ Previously, Taiwan's defense department proposed to increase the budget of NT\$200 billion to manufacture missiles. If approved, it would mean that the total budget of Taiwan Ministry of Defense would reach NT\$610 billion.²²

On August 31, Tsai Ing-wen spoke at the Kedaglan Forum, calling the mainland a "neighboring country".²³

On September 10, Taiwan's Mainland Affairs Council released the latest poll, showing that 87.5% of Taiwan people oppose "One Country, Two Systems", and 85.4% support "maintaining the status quo" in a broad sense.²⁴

On September 25, Eric Chu won the Kuomintang chairman election. On the 26th, the mainland's leader Xi Jinping issued a congratulatory message, hoping that Kuomintang and the CPC would continue to cooperate in opposing "Taiwan independence" on the basis of the "1992 Consensus".²⁵

On October 9, the mainland held a commemoration of the 110th anniversary of the 1911 Revolution. Xi stated that he would complete the "historical task" of the reunification of the China and insist on "peaceful reunification", but at the same time warned that the "Taiwan independence" secessionist "will never end well"²⁶. On October 10, at the ceremony of Taiwan National Day, Tsai Ing-wen stated that she "insists on the non-affiliation between the Republic of China and the People's Republic of China". ²⁷

On October 26, Tsai Ing-wen accepted an interview with CNN, saying that the mainland's threat to Taiwan is "increasing every day", and for the first time since 1979, she confirmed that the US maintains military presence in Taiwan.²⁸

On November 5, the Taiwan Affairs Office of the State Council issued a punishment list of "Taiwan independence", naming Su Tseng-chang, Joseph Wu, and You Si-kun as "Taiwan independence diehards". Taiwan's Mainland Affairs Council said it would not accept "intimidation".²⁹

On December 18, a four-question referendum was held in Taiwan on "restarting the 4th

²³https://www.dwnews.com/%E4%B8%AD%E5%9B%BD/60259968/%E8%94%A1%E8%8B%B1%E6%96%87%E9%8

E5%9B%BD%E8%AE%BA%E8%A2%AB%E6%8C%87%E6%8C%91%E8%A1%85%E4%B8%AD%E5%9B%BD%E5% A4%AE%E8%A7%86%E5%8F%B0%E6%B9%BE%E5%B7%B2%E6%88%90%E5%85%A8%E7%90%83%E6%9C% 80%E5%8D%B1%E9%99%A9%E7%9A%84%E5%9C%B0%E6%96%B9

²⁴https://www.dw.com/zh/%E5%8F%B0%E6%B9%BE%E5%AE%98%E6%96%B9%E6%B0%91%E8%B0%83875%E6 %B0%91%E4%BC%97%E5%8F%8D%E5%AF%B9%E4%B8%80%E5%9B%BD%E4%B8%A4%E5%88%B6/a-59138793
²⁵https://www.bbc.com/zhongwen/simp/chinese-news-58697518

²⁶https://www.dwnews.com/%E5%8F%B0%E6%B9%BE/60264766/%E4%B9%A0%E8%BF%91%E5%B9%B3%E4%B

E6%8F%90%E6%AD%A6%E7%BB%9F%E9%87%8A%E5%96%84%E6%84%8F%E8%94%A1%E8%8B%B1%E6% 96%87%E6%B6%88%E6%9E%81%E5%9B%9E%E5%BA%94%E9%87%8D%E7%87%83%E4%B8%A4%E5%9B% BD%E8%AE%BA

²⁷ https://www.voachinese.com/a/taiwan-won-t-bow-to-china-and-take-the-route-set-by-beijing-said-tsai-20211010/6264666.html

²⁸ https://edition.cnn.com/2021/10/27/asia/tsai-ingwen-taiwan-china-interview-intl-hnk/index.html
²⁹ https://www.dw.com/en/%E5%9B%BD%E5%8F%B0%E5%8A%9E%E5%85%AC%E5%B8%83%E5%8F%B0%E7 %8
B%AC%E6%83%A9%E6%88%92-%E5%9B%BD%E6%B0%91%E4%B8%A4%E5%85%9A%E9%BD%90%E5%
8F%8D%E5%AF%B9/a-59740329

²¹https://tw.appledaily.com/politics/20210828/M3HYHO5UXBG4HK652ATHSV3WH4/

²²https://gotv.ctitv.com.tw/2021/09/1879223.htm

nuclear power plant", "anti-Laibo pig imports", "referendum tied to the general election", and "the relocation of the 3rd Natural Gas Receiving Station", topics involving trade, food safety, referendum legislation, energy and environmental protection, etc. Kuomintang supported all four referendums, while the DPP opposed all of them. Results that night showed that all four referendum questions failed to pass.

Question	Ballot Read	Outcom e	Turnout	Support (%)
Restarting the 4 th nuclear power plant	Do you agree that the Fourth Nuclear Power Plant should be unsealed and operated commercially to generate electricity?	Rejected	41.09%	47.16%
Anti-Laipo pig imports	Do you agree that the government should prohibit imports of pork, offal, or other related products that contain the β-agonist, ractopamine?	Rejected	41.09%	48.79%
Referendum tied to the general election	Do you agree that a referendum should be held concurrently with a national election if it complies with the Referendum Act and if the election is scheduled to take place within six months of the referendum being approved?	Rejected	41.08%	48.96%
Relocation of the 3 rd Natural Gas Receiving Station	Do you agree that CPC Corp.'s planned site for Taiwan's third liquefied natural gas terminal should be relocated from an algal reef off the coast of Datan, Taoyuan, and its adjacent waters?	Rejected	41.09%	48.37%

(Table 1: Outcome and Questions of 1218 Taiwan Referendum, source: Taiwan Central Election Commission. ³⁰)

1.2 Features: Taiwan authorities' performance in COVID-19 pandemic prevention and control

Source: "COVID-19 Pandemic and Preventions and Control in Taiwan" ³¹, retrieved from the website of China Cross-Strait Academy (Hong Kong).

³⁰

https://referendums.2021.nat.gov.tw/?themeId=aad5b411b067a25611f7082f8fd6807c&voteType=REF&caseType=N&dataLevel=N

³¹ http://www.ccsa.hk/index.php?m=home&c=View&a=index&aid=223

The large-scale outbreak of COVID-19 in Taiwan in May 2021 once again exposed the fragile nature of Taiwan's pandemic prevention and control system. Based on the performance of the Taiwan authorities in pandemic prevention and control, this report will analyze the problems in Taiwan's public health, pandemic prevention, medical institutions, etc. Furthermore, it aims to dig out the underlying risks behind those problems.

1) Taiwan's contemporary pandemic prevention and control system

Taiwan conducted a series of reforms over its public health system after the pandemic of SARS in 2003. Author of the report introduced it in the article "The Impact of SARS on Taiwan's Public Health System and its Reform". Taiwan's current public health and pandemic prevention and control system largely inherited the framework of the reforms at that time.

In 2013, Taiwan passed the Organic Act for Ministry of Health and Welfare and upgraded the Department of Health (DOH) under the Executive Yuan into the Ministry of Health and Welfare (MOHW). The upgrade of the leading health department indicated that the Taiwan authorities attached great importance to public health work. Meanwhile, the DOH Centers for Disease Control was upgraded to the Taiwan Centers for Disease Control (CDC). The upgrade of the public health department's leading agency aimed to facilitate its communication and coordination with other departments and enable it to mobilize resources more conveniently. Moreover, in order to further improve the pandemic prevention and control system, the Taiwan authorities have amended the Communicable Disease Control Act for several times. The current version is the one passed on June 19, 2019.

The Act categorized communicable diseases into five types: SARS, diphtheria, typhoid fever, and pertussis belong to category 1 to 3. Communicable diseases of category 4 are the ones that do not belong to the previous three categories but are considered as having the risk to cause epidemics by the "central competent authority". Communicable diseases of category 5 are the ones considered as having possibilities to cause a substantial impact on the health of the population by the "central competent authority".

"Central competent authority" in this Act means the Ministry of Health and Welfare, which is in charge of Taiwan's overall public health works. All competent authorities at the central level including interior, foreign affairs, defense, justice, education, etc. as well as the local governments shall coordinate with the MOHW in the control of communicable diseases. During epidemics of communicable diseases, the Ministry of the Interior should establish the Central Epidemic Command Center to coordinate the work of disease prevention and control.

2) The COVID-19 Pandemics in Taiwan until mid-2021

On January 20, 2020, one Taiwan businessperson took the flight from Wuhan to Taiwan and then was sent to the hospital by the quarantine officer after voluntarily reporting symptoms. On January 21, the businessperson was diagnosed with "coronavirus pneumonia", which is the first COVID-19 case in Taiwan. ³³ As of January 28, Taiwan reported 578 COVID-19 cases of which 8 cases were confirmed diagnoses. The 8th case was the first domestic family infection in Taiwan.³⁴ On January 30, the World Health Organization (WHO) declared that

³² Law & Regulations Database. Communicable Disease Control Act [OL]. (2019-06-19) [2021-06-30]. https://law.moj.gov.tw/LawClass/LawAll.aspx?pcode=L0050001.

³³ BBC. Wuhan Pneumonia: Taiwan 1st Confirmed Case Returned to Taiwan by Plane. Taiwan Suspended All Tour Groups with China [OL]. (2020-01-22) [2021-06-30]. https://topic.udn.com/event/COVID19_Taiwan.

³⁴ CDC. CECC announces 1 indigenous case of 2019 novel coronavirus (2019-nCoV) infection in Taiwan. Health

the outbreak of coronavirus constitutes a Public Health Emergency of International Concern (PHEIC). On February 15, Taiwan reported the first death of COVID-19. On 16th, Taiwan had to date reported 20 confirmed cases.³⁵

On February 29, a spreading event broke out in Chang Gung Memorial Hospital that 9 people were infected by 1 case. The Taiwan authorities and the hospital took drastic actions to prevent the event from deterioration.³⁶ On February 20, 2020, *Panshih* Fast Combat Support Ship,³⁷ *Cheng Kung-*class frigate *Yueh Fei*, and *Kang Ding-*class frigate *Kang Ding* formed a fleet to participate in the *Dunmu* Voyage Training and visited Palau, a country in the Pacific Ocean. On April 9, *Panshih* returned to Taiwan and anchored at the *Zuoying* Port. On 18th, 3 probationary officers were diagnosed with coronavirus pneumonia. As of May 4, 36 crews in the ship had been confirmed infection. The *Panshih* Superspreading Event was the biggest cluster infection event in Taiwan in 2020.

According to the tracking data of Johns Hopkins University in the US, the pandemic of COVID-19 in Taiwan peaked in March when the daily new cases surpassed 20. The situation had eased since April.

January 21, 2021 marked the 1st anniversary of COVID-19 pandemic in Taiwan and the cumulative confirmed cases reached 873 including 768 imported cases, 66 domestic cases, and 7 deaths. ³⁸ Taiwan has been a "model student" for pandemic prevention in the Western media since the number of confirmed cases and deaths was among the lowest in the world.

This good situation continued until May. On May 13, 2021, there were 25 new confirmed cases in Taiwan; on the 14th, 34 new cases. And on the 15th, it suddenly increased to 185. The COVID-19 pandemic was suddenly breaking out in Taiwan. On May 27, 670 new cases were confirmed in Taiwan, which was the peak of this round of outbreaks, and afterwards entered an eased stage.

As of July 1, 2021, Taiwan cumulatively had 14,853 confirmed COVID -19 cases and 661 deaths. ³⁹

agencies proceeds with prevention measures [OL]. (2020-01-28) [2021-06-30].

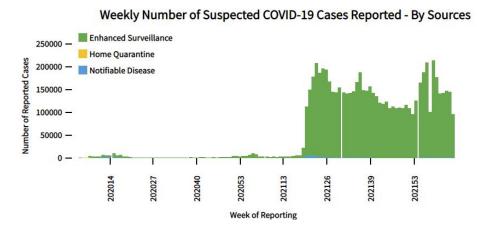
https://www.cdc.gov.tw/Category/ListContent/EmXemht4IT-IRAPrAnyG9A?uaid=1T3s2mxcCjqIE0MczXRD8w.

³⁵ Initium Media. Taiwan reported the 1st death of COVID-19 cases. The case had no travel history and was diagnosed by the government [OL]. (2020-02-17) [2021-06-30]. https://theinitium.com/article/20200217-whatsnew-taiwan-ncov-the-dead/.

³⁶ The Reporter. The 1st Anniversary of Combating COVID-19: 5 Points of Analyzing the Imported and Local Cases of Taiwan [OL]. (2021-01-21) [2021-06-30]. https://www.twreporter.org/a/covid-19-taiwan-one-year-cases-analysis

³⁷ Panshi Fast Combat Support Ship is a grand vessel of Taiwan defense departments, with hundreds of crews.
³⁸ Ibid 5.

³⁹ UND News. Tracking the Latest Data of Taiwan's COVID-19 Pandemic [OL]. (2021-06-21) [2021-07-02]. https://topic.udn.com/event/COVID19_Taiwan.



(Figure 1: Tracking Data of COVID-19 Pandemics. Source: Taiwan Centers for Disease Control.⁴⁰)

3) Pandemic prevention measures of the Taiwan authorities

Taiwan has conducted strict prevention measures from the beginning of COVID-19 pandemic based on the experience of SARS.

At the end of 2019, the coronavirus spread in Wuhan on a small scale. Taiwanese netizens discussed the emergency document issued by the Wuhan Health Commission on PTT, which aroused the attention of CDC staff. On December 31, after the Taiwan CDC confirmed the information to the Chinese Center for Disease Control and Prevention (CCDC) and WHO, the vice president of Executive Yuan held a reaction and preparation meeting. On the same day, Taiwan launched the border control measures, requesting all passengers entering Taiwan from Wuhan to have their temperature taken. This was the beginning of Taiwan's COVID-19 pandemic prevention and control measures.

On January 2, 2020, the CDC established the response working group and requested hospitals and clinics to report all cases with symptoms or travel history to Wuhan. On January 12, a group of Taiwan experts went to Wuhan for investigation. On January 15, Taiwan CDC categorized the COVID-19 into the 5th category of communicable diseases according to the latest version of Communicable Disease Control Act, marking the launch of COVID-19 prevention and control measures. On January 20, Taiwan authorities established the Central Epidemic Command Center (CECC), as the leading agency to fight against the COVID-19 pandemic.

In the article "The Impact of SARS on Taiwan's Public Health System and its Reform", author has introduced the CECC. Its main function is to integrate resources of "competent authorities". By then, Taiwan did not have any confirmed cases. With no confirmed case, Taiwan established a Level 3 CECC and CDC Director General Chou Jih-haw served as the commander.

After the CECC confirmed the first COVID-19 case on January 21, the leader of the Taiwan authorities Tsai Ing-wen held the National Security Meeting to coordinate the prevention and control work. On January 23, Wuhan city was locked down. The CECC was elevated to Level 2, and the Minister of Health and Welfare Shih-Chung Chen served as the Commander.

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 $^{^{\}rm 40}$ CDC, Tracking Data of COVID-19 Pandemics [OL]. (20211-06-22) [2021-07-02]. https://sites.google.com/cdc.gov.tw/2019ncov/taiwan.

Meanwhile, it started to investigate the people who entered Taiwan from Wuhan in the past 14 days (the first list included 1225 personnel), coordinated local administrative agencies, and started home quarantines.

On January 25, Taiwan authorities suspended all outbound packaged tours from Taiwan to China; on 26th, announced the entry restrictions for Chinese nationals from entering into Taiwan; on 28th, elevated the mainland travel notice to Level 3 Warning; on February 6, listed the mainland, Hong Kong, and Macau as Level 2 Epidemic Area and announced that citizens returning from those places should undergo home quarantine for 14 days.

On February 10, the Taiwan authorities suspended the "Three Links and Three Small Links" and passenger airlines except those flying to/from five airports including Beijing Capital Airport, which basically means cutting off transportation connection with the mainland. On February 25, the Taiwan Legislative Yuan promulgated the "Special Act for Prevention, Relief and Revitalization Measures for Severe Pneumonia with Novel Pathogens". On 27th, CECC was further elevated to a level 1 facility. Chen Shih-chung remained as the Commander and the Deputy Commander was the Deputy Minister of the Interior Chen Tsung-Yen. The CECC framework set one Expert Consultant Meeting and three sections including Intelligence, Operation, and Logistics, leading 10 groups governing epidemic supervision, border quarantine, community epidemic control, healthcare response, resource coordination, research and development, information management, administration, public information, and legislation. ⁴¹

The coronavirus patients need to be treated collectively. The Taiwan authorities divided the island into 6 areas, each of which had one response hospital, receiving and treating patients collectively. Afterwards, in case of the medical resources' shortage, cities and counties established response hospitals as well, forming a medical network. Thereafter, the strategy switched from designating response hospitals to setting specialized wards and treating locally while increasing the number of collection and examination hospitals, aiming to cover more areas and improve the examination efficiency. As of September 22, 2020, 72 examination hospitals had been designated by the CECC in Taiwan.

On February 15, Taiwan reported the first death from coronavirus, who was a driver of a "white plate taxi". ⁴² The CECC took it highly seriously and traced his activity trajectory. With the cooperation of the transportation department, police and other authorities, it was found out that he had 164 carrying records and had potential contact with more than 600 passengers. The CECC coordinated local governments of urban and rural villages to undergo home quarantine to these 600 passengers. The police departments collaborated on isolation measures and the police were in charge of examining the quarantined.

On February 16, the CECC strengthened the community epidemic prevention work comprehensively, monitoring the high-risk group that had outbound travel history within 14 days or had symptoms like fever.

It was not enough to only count on the government to prevent pandemic. The Taiwan authorities widely mobilized the citizens. On March 13, the CDC announced the "Guidelines for Community Epidemic Prevention Manpower in Response to Severe Pneumonia with Novel Pathogens (COVID-19)" to effectively integrate resources to combat COVID-19.

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⁴¹ MOHW. On the Way of Combating COVID-19 – Recording the Key Moments of Pandemic Control and Prevention[M]. Taiwan: Global Views – Commonwealth Publishing Group, 2020.

⁴²It refers to the unlicensed taxi driver, known as "black taxi driver" in the mainland.

The Guidelines stipulated that all municipalities, counties, and city governments in Taiwan should check and consolidate the manpower in villages, health centers, social welfare institutions, apartment management committees, schools, religious groups, community patrols, volunteer workers, environment protections organizations, etc. The local governments should coordinate resources and recruit volunteers to "form the community epidemic prevention teams and distribute tasks". They were also responsible for the community isolation and home quarantine, while managing propaganda, communication, intelligence collection, psychological consultant, etc. Relevant departments should also guarantee the communities' daily supplies, basic functions, and social stability, enabling the communities to be "self-dependent". ⁴³

The Taiwan authorities employed the Smart Pandemic Prevention System to enforce home isolation and monitor the quarantine personnel. It introduced the digital system of Health Declaration and Home Quarantine and required all inbound travelers to fill relevant information online. On March 18, the Taiwan authorities combined the Quarantine System for Entry and the Intelligent Electronic Fence System to trace the movements of those entering Taiwan.

Taiwan's healthcare system has been fully digitized and the information from all departments is transferable. Citizens' information about healthcare, travel history, employment history, etc. could all be searched collectively. When the suspected cases come for treatment, the medical staff would upload their information online and report to the CECC.

To sum up, the Taiwan authorities have established a comprehensive, grass-root, and responsive pandemic prevention and control system. From April to December 2020, there were no new domestic cases in Taiwan during these 8 months. It is proof that the system will be very efficient in pandemic prevention and control if it could fully function.

On January 21, 2021, the MOHW stipulated that the CECC could announce that the whole Taiwan Island or any area of it enters epidemic warning level from 1 to 4. According to the stipulation, Taiwan was under the epidemic warning level 1 since there were "sporadic cases infected by imported sources". People were requested to wear masks in public, cancel non-essential large-scale events, and keep social distance.⁴⁴

Until May 2021, Taiwan's prevention and control system was functioning normally. However, the pandemic broke out in mid-May, pointing out the underlying Achilles' heel of the system.

4) The resurgence of COVID-19 pandemic and the Taiwan authorities' response

On May 11, 2021, community transmission events happened in Taiwan and caused 7 new local cases of which 6 were infected by unknown sources. Taiwan raised the nationwide epidemic alert to level 2.

On 12th, the epidemic broke out in Wanhua District of Taipei, Luzhou District of New Taipei, and Keelung. On the 14th, the number of local cases reached 29. On May 15, the CECC raised the epidemic alert level for Taipei City and New Taipei City to Level 3 and to level 3 Taiwan-

https://www.cdc.gov.tw/File/Get/9jZe2fJ6ZYpGLpb1bICt9w.

⁴³ CDC. Guidelines for Community Epidemic Prevention Manpower in Response to Severe Pneumonia with Novel Pathogens (COVID-19) [OL]. (2020.03.13) [2021-06-30].

⁴⁴ CDC. COVID-19 Pandemic Alert Standard and Corresponding Precautions [OL]. (2021.01.21) [2021-07-01]. https://www.cdc.gov.tw/Uploads/Files/05a8c38e-bdae-4d15-b073-8413488d818c.jpg.

wide on the 19th.

According to the CECC regulations, epidemic alert level 3 means no indoor event with more than 5 people and outdoor event with more than 10 people are allowed; all stores and public places, except for essential public services to ensure social operation, must be closed; if the community has cluster infection event, it should be locked down and isolated. People should cooperate with investigation and testing.

It can be seen that the Taiwan authorities responded in time, but they neglected one important work, which was the mass testing to locate the infected group in the first place.

As mentioned before, Taiwan strengthened its public health system after the 2003 SARS pandemic. Its health units and medical institutions cover all counties, cities, townships, and villages. In the 2020 COVID-19 pandemic, the Taiwan authorities established the testing system covering the whole territory. At the local level, the community, the public, and the police are all mobilized to attend the epidemic prevention and control work. To summarize, Taiwan is capable of conducting the mass testing, but it has not done it.

On June 14, Taiwan China Times published an interview report of the former CDC Director General Su Yiren, stating that the Taiwan authorities failed crucially in the testing work since the COVID-19 pandemic in May 2021. After several community transmission and cluster infection events broke out, Taiwan stuck to the voluntary testing instead of mass testing. Su suggested that now the confirmed cases might only be a small part of the whole, and the actual situation might be much worse.⁴⁵

Actually, the data of voluntary testing was not accurate. Media found out that the data released by Shih-Chung Chen, the MOHW Secretary General and the CECC Commander, was not consistent at different occasions. At the early stage of the breakout, the number of new confirmed cases every day released by the Taiwan authorities was relatively low, but it then increased at the later press conference. Shih-Chung Chen called it "retrospective adjustment", explaining that it was because of the "traffic jam" of data screening, not the authorities lying to the public. The reputation of Taiwan authorities was severely stained.

5) Issues of Taiwan pandemic prevention and control system

The COVID-19 pandemic in Taiwan shows a contradicting image from January 2020 to the present day. On one hand, the Taiwan authorities responded swiftly and attached great importance to it, preventing the large-scale breakout in 2020. On the other hand, the pandemic still broke out suddenly in May 2021 under various prevention and control measures.

Two questions are involved here: Is Taiwan's epidemic prevention and control system capable of combating the COVID-19 pandemic? Is the prevention and control system fully functioning?

Answer to the first question is yes. The control of COVID-19 epidemic in 2020 is the proof of the system's capability. As stated above, after several reforms of the public health system, Taiwan has established a comprehensive epidemic prevention and control system. Firstly, the work of epidemic prevention and control is obedient to the rule of law. The mobilization of resources is supported and guaranteed by the system of the central and local

⁴⁵ China Times. Su Yiren: Controlling and reducing the damage by universal tests and enhanced quarantine [OL]. $(2021-06-14)\ [2021-07-01].\ https://www.chinatimes.com/cn/newspapers/20210614000670-260102?chdtv.$

governments. Secondly, the system covers all grassroot levels relying on the coordination of health centers, community hospitals, and clinics. Thirdly, the Taiwan authorities are able to monitor the traces of suspected cases, close contacts, and other key personnel and detect the development of epidemic, with the coordination of communities, villages, police, and the interior department as well as the digitized healthcare system. Finally, the Taiwan authorities have mobilized the local forces to prevent and control the epidemics in the past, which means they have competent local administration and mobilization abilities.

If the system could fully function, the COVID-19 pandemic would not break out in May 2021. Because of the Taiwan authorities' ignorance, the mass testing was not conducted, and the reporting system was blocked, making that the CECC Commander Chen Shih-chung unable to know the actual data and had to cover the false by "retrospective adjustment". Answer to the second question is no. The system was not functioning at its full strength.

Actually, the outbreak in May 2021 was not clueless. In April, the pilot of Taiwan China Airlines was diagnosed with COVID-19 infection. Then, a cluster infection event happened because of the quarantine hotel Novotel's poor management and its staff's negligence. As of May 14, there were 37 confirmed cases including the pilot and the hotel staff, and 412 people were quarantined. This event indicated that there were loopholes in Taiwan's pandemic prevention and control system at the implementation level, which should have aroused the CECC's attention but failed.

The loopholes were not only because of the staff's negligence, but also had its political causes. In June 2020, with the collaboration with Taiwan University, the Changhua County Public Health Bureau led by the pan-Blue force carried out serological antibody test among the high-risk groups (frontline people of epidemic prevention such as doctors, nurses, police, and firefighters) to examine the community transmission of the coronavirus. The result suggested that the positive rate was 8/10000, indicating that the epidemic prevention and control of Changhua County functioned properly and the communities were not endangered by the transmission. However, the MOHW thought that Taiwan University and the Changhua County Public Health Bureau violated the Human Subjects Research Act, so the test was punished instead of being praised. Changhua County and Taiwan National University had to express regret.

In May 2021, when the pandemic broke out again, Kinmen County wanted to set up rapid test sites at the airport. However, the proposal was rejected by the MOHW and the established sites had to be demolished. If the punishment for Taiwan University and Changhua County was rational, Kinmen County's proposal to strengthen border control was completely in line with the MOHW's requirement of pandemic prevention and control, but it was unreasonably criticized again. Considering Taiwan's rejection of the mainland's vaccines which caused nearly one thousand deaths because of the "cocktail vaccination" proposed by the Taiwan authorities, one could easily doubt whether political interests could take precedence over pandemic prevention and people's personal and property security in a panpoliticalized Taiwan. There is no doubt that the large-scale outbreaking of COVID-19 in Taiwan in 2021 not only indicated problems in its public health system, but also pointed out the fundamental problem in Taiwan's political system, which was the growingly extreme political manipulation of the DPP authorities.

2. Military Dimension

2.1 Timeline of the Cross-Strait military events in 2021

On January 23, 2021, the US Navy Theodore Roosevelt Carrier (CVN-71) Strike Group entered the South China Sea from the Philippine Sea through the Bashi Strait in southern Taiwan. On January 25, Chinese Ministry of Foreign Affairs expressed protest against the US and the Chinese People's Liberation Army (PLA) conducted military exercises in the East China Sea and the South China Sea, dispatching main battle ships including the Type 051B destroyer *Shenzhen* (167), the Type 052B destroyer *Wuhan* (169), and the Type 054A frigate *Hengyang* (568).⁴⁶

On February 4, the US destroyer USS McCain (DDG-56) crossed the Taiwan Strait for the first time since the US President Joe Biden took office.

On March 9, General Phillips Davison, the commander of the US Indo-Pacific Command, said in a Senate hearing that the mainland may launch reunification by force within the "next six years".⁴⁷ On March 11, the US destroyer USS John Finn (DDG-113) passed through the Taiwan Strait.

On April 5, a spokesperson for the PLA Navy (PLAN) stated that aircraft carrier *Liaoning* (016) was conducting exercises near the island of Taiwan. On April 10, the US Navy released a photo taken on the deck of its Ali Burke-class destroyer USS Mustine (DDG-89). Captain Robert Briggs was staring at the Chinese aircraft carrier *Liaoning*. The distance between the two ships was only a few kilometers. As reported, the incident took place in the East China Sea on April 5.⁴⁸ There were also reports stating that the incident happened in the Philippine Sea on April 4.⁴⁹

On April 7, the US destroyer USS McCain (DDG-56) transited the Taiwan Strait and the Taiwan authorities announced the annual Han Kuang military exercise on the same day. Taiwan Minister of Foreign Affairs Joseph Wu said, "Taiwan must fight to the end if China attacks". ⁵⁰ On April 17 and 18, China Eastern Theater Command conducted 9-hour live-fire exercise with dozens of H-6K bombers.

On May 18, the US Navy USS Curtis Wilbur (DDG-54) transited the Taiwan Strait

On June 17, Taiwan Ministry of National Defense claimed that it had signed two arms procurement contracts with the American Institute in Taiwan, worth NT\$9.6 billion and NT\$ 39 billion respectively. The two arms packages included the US-made HIMARS rocket launchers (M142) and other arms. These procurements needed to be reviewed and

https://www.dw.com/zh/%E5%8F%B0%E6%B9%BE%E5%A4%96%E9%95%BF%E5%A6%82%E6%9E%9C%E4%B8% AD%E5%9B%BD%E6%9D%A5%E8%A2%AD%E5%8F%B0%E6%B9%BE%E5%BF%85%E5%B0%86%E5%A5%8B%E6% 88%98%E5%88%B0%E5%BA%95/a-57120389

⁴⁶ https://www.dw.com/zh/美国新国务卿许诺支持台湾-促北京停止施压/a-56328786

 $^{^{47}\}mbox{https://www.voachinese.com/a/Davison-warns-China-could-invade-Taiwan-in-six-years-20210310/5809018.html}$

⁴⁸ https://www.scmp.com/news/china/diplomacy/article/3129122/us-navy-warns-china-were-watching-you-destroyer-shadows

 $^{^{49}}$ https://hk.appledaily.com/china/20210411/IOGXNQMT7FABDFOF4E6HXBL4ZM/ 50

approved by the US State Department.⁵¹

On June 22, the US Navy destroyer USS Curtis Wilbur (DDG 54) transited the Taiwan Strait.

On July 28, the destroyer USS Benfold (DDG-65) transited the Taiwan Strait.

On July 26, American media reported that China employed one civilian RO/RO ferry in a military amphibious landing exercise one year ago. This 15,560-ton vessel was used to deliver the ZTD-05 amphibious assault vehicle.⁵² China's military force has been developing rapidly in recent years and its goal is to be able to launch the Taiwan Strait War by 2020. Foreign military experts pointed out that the problem of the Chinese army is the lack of amphibious transport capacity, and the requisition of civilian ships is a solution.⁵³

On August 2, the US aircraft carrier USS Carl Vinson (CVN-70) departed from the military port of San Diego, California for deployment in the Indo-Pacific region. Aboard Vinson was Strike Fighter Squadron 147 (VFA-147) with F-35C fighters. This was the first time that the US deployed the 5th-generation fighter squadron on an aircraft carrier.

On August 4, the US Defense Security and Cooperation Agency announced that the State Department approved the sale of 40 sets of 155mm M-109A6 Paladin self-propelled howitzer with auxiliary equipment and after-sale service to Taiwan in a total value of \$750 million, along with 20 M992A2 Field Artillery Ammunition Support Vehicles (FAASV), 5 M88A2 Hercules armored maintenance vehicles, Advanced Field Artillery Tactical Data System, etc.⁵⁴

On August 17, the PLA Eastern Theater Command conducted joint firepower assault and other live- drills involving naval and air forces in the sea and airspace surrounding the southwest and southeast of the Taiwan Island. The spokesperson for the PLA Eastern Theater Command said this operation was a response to the conspiracy of the US and Taiwan.55

On August 27, the US Navy destroyer USS Kidd (DDG 100) and legend-class US Coast Guard National Security Cutter Munro (WMSL 755) conducted a Taiwan Strait transit.

On September 17, the US Navy destroyer USS Barry (DDG 52) conducted a Taiwan Strait transit.

On October 14 and 15, the US Navy destroyer USS Dewey (DDG 105) conducted a Taiwan Strait transit in cooperation with Royal Canadian Navy Halifax-class frigate Winnipeg (FFH-338).⁵⁶

On November 17, Taiwan commissioned F-16V fighter jets, which were purchased from the US, into service at Chiayi Airbase. Equipped with 20 F-16V jets, the 21st Tactical Fighter Squadron of the 4th Tactical Fighter Wing of Taiwan Air Force was the first unit with

⁵¹ https://www.bbc.com/zhongwen/simp/chinese-news-57524293

⁵² https://news.usni.org/2021/07/26/chinese-navy-using-commercial-car-ferries-to-launch-amphibious-landing-

⁵³https://news.usni.org/2021/07/26/chinese-navy-using-commercial-car-ferries-to-launch-amphibious-landing-

⁵⁴ https://www.defensenews.com/global/asia-pacific/2021/08/06/us-government-clears-750-million-artillerysale-to-taiwan/

⁵⁵ https://www.163.com/dy/article/GHLNLBJJ0514R9OJ.html

⁵⁶ https://thehill.com/policy/defense/577086-us-canadian-war-ships-sail-through-taiwan-strait?rl=1

upgraded fighters. Tsai Ing-wen attended the ceremony.⁵⁷

On November 23, the US Navy destroyer USS Milius (DDG 69) conducted a Taiwan Strait transit.⁵⁸

On December 21, the Japan Self-Defense Force reported that the PLAN carrier group led by aircraft carrier *Liaoning* (016) was operating in the water near the Oki Daito Island, 315 kilometers southeast of the Okinawa Island the day before. The Japanese military said that on the 16th, the *Liaoning* carrier group was operating in the water between Miyako Island and Okinawa Island, and then sailed southwards into the Pacific Ocean. JS helicopter carrier *Izumo* (DDH-183) and destroyer *Akizuki* (DD-115) tracked and monitored the PLAN's ships.⁵⁹

On December 30, Senior Colonel Tan Kefei, spokesperson of the mainland's Ministry of National Defense criticized the DPP authorities of hyping about "the PLA Airforce has dispatched 961 sorties of military planes to Taiwan's 'southwest airspace' in 239 days in 2021, which is the peak in recent years" at the regular press conference. He stated that "The root cause of the current escalation of tensions across the Taiwan Strait lies in the provocations of the DPP authorities and the 'Taiwan independence' separatist forces, and the attempts of external forces to use Taiwan to contain China... The actual number of aircraft dispatched by the PLA can only be greater than the number claimed by the DPP authorities".60

2.2 Features: The Anti-access/Area Denial (A2/AD) and Countering A2/AD capabilities from the perspective of hypersonic weapons

Since the separation of the mainland and the Taiwan Island in 1949, the mainland has been promoting the process of the Cross-Strait integration and reunification and reiterating the principle of "Peaceful Reunification" and the "One Country, Two Systems" policy, while reserving the right to use forces. Nowadays, the military balance across the Strait has already changed and Taiwan's military power is no longer an obstacle to reunification. The most influential military variable of the Cross-Strait situation is external military interference led by the US. China Cross-Strait Academy (Hong Kong) elaborated this in the "Report on 2021 Cross-Strait Relations Risk Index" released in May 2021.

Now, the A2/AD and Countering A2/AD capabilities have become the essential competing area of all actors involved in Cross-Strait combat especially for China and the US. As an international hegemon, the US relies on the Countering A2/AD capability to be involved in the Cross-Strait conflict and transfer weapons and forces to Taiwan. Meanwhile, China has developed an A2/AD system in the years of military confrontation with the US, which is a nearshore-based defense system expanding to the sea. It is composed of multiple units including reconnaissance, communication, command, firepower delivery, and force projection. At the current stage, hypersonic weapons have become the key competing area of China and the US.

⁵⁹ https://news.usni.org/2021/12/22/chinese-carrier-group-drills-in-pacific-ocean-carl-vinson-carrier-strike-group-wraps-up-exercise-with-australia

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⁵⁷https://www.defensenews.com/global/asia-pacific/2021/11/19/taiwan-brings-upgraded-f-16s-into-service/

⁵⁸ https://news.usni.org/2021/11/23/destroyer-uss-milius-performs-taiwan-strait-transit

⁶⁰ http://www.mod.gov.cn/shouye/2021-12/30/content 4901997.htm?isappinstalled=0

1) China's hypersonic weapons

Hypersonic weapons refer to the weapon systems that can fly at speeds over Mach 5 in the atmosphere. They can be a ballistic missile like China's Dongfeng-17, or a cruise missile like Russia's Zircon system. According to the launch platform, they can be divided as land-based, sea-based, and air-based. They can carry nuclear warheads or conventional warheads.

Before the advent of hypersonic weapons, the mainstream firepower delivery methods were subsonic and supersonic vehicles with the speed boundary of Mach 1. There are various types of such weapons and countries have established relatively mature defense mechanisms. Taking the US Navy as an example, the Ticonderoga-class cruiser USS Lake Champlain (CG 57) is equipped with Standard Missile (SM) 2, SM-3, SM-6 as middle and long-range anti-air capabilities, and has anti-ballistic-missile defense capability; it is also equipped with extended-range Seasparrow Missile and Phalanx Close-In Weapon System which can effectively shoot down incoming subsonic and supersonic anti-ship missiles. Traditional anti-ship firepower delivery methods are less effective in the face of this type of defense mechanism, so the hypersonic weapons are created. With the speed over Mach 5, hypersonic weapons have greater firepower projection capabilities and are less likely to be shot down, which makes it easier to achieve operational targets.

According to the 2021 China Military Report released by US DOD in November 2021, China commissioned its first hypersonic weapons, the Dongfeng-17 medium-range ballistic missile. Flight tests of the missile started in January 2014. As of November 2017, China has conducted 9 tests. DF-17 is a solid-fueled road-mobile missile mounting glide vehicle, with an operational range of 1,800 to 2,500 kilometers and speed of Mach 5 to 10. It can carry conventional or nuclear warheads and has anti-ship capabilities. If the report is true, DF-17 is essential for China's A2/AD system, which will be China's first missile weapon (and the only one by now) that the US Navy cannot defend against. With the advent of China's DF-17 and the fact that the US has no deployment of any supersonic weapon, China's military forces are already superior to that of the US in the Cross-Strait confrontation.

Besides, the hypersonic weapons projects that China is developing also include Xingkong-2, with the expected speed of Mach 6; DF-41 intercontinental ballistic missile which can project supersonic gliders; some "Fractional Orbital Bombardment System" (FOBS) tested in August 2021, which can deliver supersonic warheads after landing on the targeted area.

2) The US hypersonic weapons

The US is also stepping up the development of hypersonic weapons, but there is no weapon fielded in operation yet. The following are several hypersonic weapons being developed by various service branches of the US armed forces.⁶²

US Navy: Conventional Prompt Strike (CPS), expected to start testing on destroyers by fiscal year (FY) 2025.

US Army: Long-Range Hypersonic Weapon (LRHW), expected to have flight test in FY 2022.

US Air Force: AGM-183A Air-launched Rapid Response Weapon (ARRW), which has been tested several times. Hypersonic Attack Cruise Missile (HACM)project will start in FY 2022.

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⁶¹ https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF

⁶² https://sgp.fas.org/crs/weapons/R45811.pdf

Defense Advanced Research Projects Agency (DARPA): Tactical Boost Glide (TBG), will continue tests in FY 2022; Operational Fires (OpFires), incomplete critical design review; Hypersonic Air-breathing Weapon Concept (HAWC), incomplete program review.

Among these above-mentioned projects, the US Air Force's AGM-183A ARRW proceeds the fastest. Developed by Lockheed Martin, it is an air-launched boost-glide ballistic missile delivering warhead capable of traveling at speeds of Mach 6.5 to Mach 8 with a range of 1,600 kilometers. The test of ARRW system started in April 2021 but failed. In July 2017, a second flight test was conducted with the missile being dropped from a B-52 bomber, and the test failed as the rocket motor failed to ignite. On 15 December 2021, the third flight test failed to launch for unknown reasons. The US Air Force claimed to get on to the next test as soon as possible and to reach an operational capability in FY 2022.⁶³ According the US military's introduction, the weapon can be carried by multiple platforms including the B-52 bomber, B-1B bomber, and F-15 fighter jets. Since FY 2022 of the US has already started (from October 1, 2021 to September 30, 2022), deployment of the weapon may start very soon. Yet if the test fails again, the deployment of ARRW system may be postponed to FY 2023 or even FY 2024.

The second fastest developed is the US Army's LRHW system. On October 7, the US Army 5th Battalion, 3rd Field Artillery Regiment, 17th Field Artillery Brigade received the first batch of LRHW weapons with the range of 2,775 km, possibly fielded in Guam. The package included the command center and launch vehicles. This battalion will start to test firing in the early FY 2022⁶⁴ and aims to have operational capability in FY 2023.⁶⁵ The test flights of Common-Hypersonic Glide Body (C-HGB) used in LRHW succeeded twice in 2017 and 2020.⁶⁶ No matter which weapon is fielded first, it marks that the US military will have the first operational supersonic weapons system.

Once the US military's supersonic weapons are deployed, it will pose a crucial threat to the China mainland. Just imagine that LRHW enables the US military to project firepower to the mainland from Guam. ARRW can be delivered by the long-range bomber with the approximate distance of 1,600 km, which means the US military's B-52 bomber fleet can take off from Guam, or even further from Australia and Hawaii (operational range of the bomber can reach 14,000 km), and project firepower to the mainland's onshore or offshore targets from the somewhere in the vast Western Pacific Ocean. The missile travels at the speed of Mach 8 and it takes less than 10 minutes to travel 1,600 km, leaving the target area very limited time to alert and react. China's A2/AD system now is not capable of intercepting either the delivery vehicles or the missiles. To sum up, supersonic weapons will be a powerful tool for the US to interfere in Cross-Strait relations and that is not what the mainland wants.

3) Summary

Hypersonic weapons play an important role in the confrontation between China's A2/AD system and the US' Countering A2/AD system. In 2020, China deployed its first hypersonic weapon DF-17 ballistic missile while the US has not deployed any similar weapons yet.

 $^{63}\ https://www.thedrive.com/the-war-zone/43575/third-test-of-the-air-forces-hypersonic-weapon-has-failed-like-the-ones-before-it$

 $^{^{64}}$ https://www.defensenews.com/breaking-news/2021/10/07/dark-eagle-has-landed-us-army-finishes-equipping-first-unit-with-hypersonic-capability-minus-the-missiles/

⁶⁵ https://breakingdefense.com/2021/10/army-receives-first-prototype-hypersonic-hardware/

 $^{^{66}\} https://www.defensenews.com/smr/army-modernization/2020/03/20/pentagons-major-hypersonic-glide-body-flight-test-deemed-success/$

According to the US' research and development expectation, it will have the opportunity to complete the deployment of AGM-183A ARRW and LRHW systems from FY 2022 to FY 2024. Before that, China's A2/AD system will stay in the dominant position and the US Navy's activities in the Western Pacific will be, de facto, essentially restrained. The US aircraft carrier strike groups have to be exposed to the threat of unstoppable DF-17 missiles. But after the ARRW and LRHW are in service, the US will resume its advantage with its larger and complete warfare system. China would not want that. Nevertheless, competition between China and the US will not cease because of the deployment of one or two weapons and more hypersonic weapons will be developed. In the 3rd decade of the 21st Century, these weapons will be the key factor that affects the balance of the China-US confrontation.

3. Economic Dimension

3.1 Timeline of Cross-Strait economy and trade events in 2021

On January 22, John Deng, Taiwan authorities' head negotiator of the Office of Trade Negotiations (OTN) under the Executive Yuan, said that Taiwan will seek to sign a free trade agreement with the US, hoping it will be reached when conditions are ripe. ⁶⁷Previously, Taiwan had opened up imports of pork containing clenbuterol from the US. On January 28, the mainland announced a ban on importing meat from Taiwan.

On February 26, the General Administration of Customs of China announced a moratorium on the import of pineapples from Taiwan, which took effect on March 1. According to the Taiwan Affairs Office, it is because of multiple occurrences of "quarantine pests" in imports in 2020. Taiwan authorities' leader Tsai Ing-wen called on people to "eat pineapples to support the farmer". ⁶⁸Afterwards, the offices of Canada, the United States, Japan, Switzerland, the United Kingdom, Germany and other countries in Taiwan used social media to help Taiwan sell pineapples. The Canadian Trade Office in Taipei called Taiwan's products "freedom pineapples". Taiwan authorities said that by early March, five-day order volume of pineapples was equivalent to one-year's sales in the mainland. ⁶⁹。

On September 16 and 22, the mainland and Taiwan applied to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) separately. On September 23, the mainland's Ministry of Foreign Affairs expressed firm opposition to Taiwan's application.

On September 25, the mainland announced a ban on importing the sugar apples and wax apples from Taiwan, on the grounds that these fruits were infected with scale insects. This is the second time the mainland has banned Taiwan fruit imports in 2021.

On November 5, according to media reports, Taiwan filed a lawsuit at the WTO over the mainland's ban on the import of pineapples, wax apples and sugar apples.⁷¹。

On November 22, five mainland provinces and cities including Shanghai and Jiangsu launched joint enforcement actions against the chemical fiber, cement and other industries of Taiwan Far Eastern Group. Media said that there are political considerations behind this. The Far Eastern Group is considered to be the "financial master" behind the "Taiwan independence" forces. The mainland doesn't want Taiwan-funded enterprises to support them.⁷²

⁶⁷ https://www.dw.com/zh/%E7%9B%BC%E6%B0%B4%E5%88%B0%E6%B8%A0%E6%88%90-%E5%8F%B0%E6%B9%BE%E4%BA%89%E5%8F%96%E4%B8%8E%E7%BE%8E%E7%AD%BE%E8%87%AA%E8%B4% B8%E5%8D%8F%E5%AE%9A/a-56312030

⁶⁸ https://www.bbc.com/zhongwen/simp/chinese-news-56233196

⁶⁹ https://www.rfa.org/mandarin/yataibaodao/gangtai/hx0303a-03032021063224.html

⁷⁰ https://www.cna.com.tw/news/firstnews/202109260224.aspx

https://www.dw.com/zh/%E4%B8%A4%E5%B2%B8%E6%B0%B4%E6%9E%9C%E6%88%98%E5%BB%B6%E7%83% A7-%E5%8F%B0%E6%B9%BE%E5%90%91wto%E7%94%B3%E8%AF%89%E4%B8%AD%E5%9B%BD/a-59728151

72 https://www.bbc.com/zhongwen/simp/chinese-news-59416392

3.2 Features: Taiwan's economic growth in 2021

1) Taiwan's GDP growth in 2021

Year and quarter	Nominal GDP (million \$NT)	Economic growth rate (%)	GNI per capita (\$NT)	GNI per capita (\$US)
2019	18 908 632	3.06	821 527	26 561
Q1	4 580 792	2.05	202 367	6 561
Q2	4 614 922	2.99	201 956	6 480
Q3	4 770 449	3.43	201 613	6 457
Q4	4 942 469	3.70	215 591	7 063
2020	19 798 597	3.36	863 806	29 202
Q1	4 693 881	2.99	206 492	6 842
Q2	4 721 878	0.63	205 985	6 875
Q3	5 077 078	4.31	221 752	7 514
Q4	5 305 760	5.30	229 577	7 971
2021	21 706 461	6.45	942 391	33 638
Q1	5 283 792	9.20	230 372	8 115
Q2	5 228 399	7.76	226 924	8 107
Q3	5 427 963	4.37	234 994	8 432
Q4	5 766 307	4.86	250 101	8 984

(Table 2: Taiwan's economic growth from the first quarter of 2019 to the fourth quarter of 2022. Source: Taiwan Ministry of Economic Affairs.⁷³)

Taiwan's total nominal GDP in 2021 is \$NT21.71 trillion, about \$US774.8 billion.

The nominal GDP growth rate in 2021 was 6.45%, of which Q1's and Q2's growth was 9.2% and 7.76% respectively. Such a high-speed growth is rare in several years. In fact, since 2002 when the Taiwan authorities' Ministry of Economic Affairs announced the highest figure of economic growth, 6.45% is a very rare high growth rate. Considering that Taiwan's economy did not fall into recession in 2020, which means there is no "lower base" situation. Therefore, this achievement in 2021 was not easy to make. In Q3 and Q4, Taiwan's nominal GDP growth rate was 4.37% and 4.86%, slightly higher than the "normal" range of the past years. After two years' medium- and high-speed growth, Taiwan's per capita GNI⁷⁴ has reached US\$29,000 in 2020 and exceeded US\$30,000 in 2021.

⁷³ https://dmz26.moea.gov.tw/GA/common/Common.aspx

⁷⁴ Per capita GNI does not equate per capita GDP, but the amount is similar. The Taiwan authorities has not released the data of per capita GDP.

2) Taiwan's GDP structure

There are two approaches to examine the structure of GDP: expenditure method and industrial structure. According to the expenditure method, GDP = private consumption + government consumption + investment + net exports. Taiwan's data is as follows.

			In	ternal demai	nd		Exter	nal net d	emand
Year and Quarte r	Gross GDP	Total	Private consumptio n	Governmen t consumptio n	Internal fix capital formation	Increas e in stocks	Total	Export of product s and service	Import of produc t and service
2021	100.00	85.06	44.69	13.52	26.03	0.82	14.94	66.32	51.38
Q1	100.00	86.14	46.73	13.97	25.16	0.28	13.86	61.35	47.49
Q2	100.00	83.98	43.95	12.82	25.70	1.51	16.02	67.27	51.25
Q3	100.00	85.58	43.26	13.18	28.12	1.02	14.42	68.02	53.60
Q4	100.00	84.55	44.83	14.06	25.14	0.51	15.45	68.41	52.96

(Table 3: Taiwan's GDP composition in 2021 by expenditure method. Source: Taiwan Ministry of Economic Affairs.)

As shown in Table 3, Taiwan's economic growth is mainly contributed by internal demand, and the largest section is private consumption, which accounts for 44.69% of the total. The second largest section is investment, which accounts for 26.03%. Then comes government consumption. Net exports account for 15.45%. Net exports = exports - imports. If we only look at the exports, it accounts for as high as 66.32% in 2021. All in all, Taiwan's economy has two engines, one is private consumption and the other is export trade.

From the Q1 to Q4 of 2021, the proportion of private consumption to GDP has shrunk from 46.73% to Q3's 43.26% and increased to 44.83% in Q4. Yet the proportion of exports and net exports increased, which shows that in 2021, the growth rate of the foreign trade sector exceeded that of consumption. Its importance to Taiwan's economy also increased.

			Ir	External net demand					
Year and Quarte r	Gros s GDP	Tota I	Private consumptio n	Government consumptio n	Internal fix capital formation	Increas e in stocks	Tota I	Export of product s and service	Import of produc t and service
2021	6.45	4.55	-0.18	0.53	3.55	0.65	1.90	9.89	7.99

Q1	9.20	4.37	1.32	0.62	2.96	-0.53	4.83	12.21	7.38
Q2	7.76	3.30	-0.22	0.30	3.27	-0.04	4.45	12.76	8.31
Q3	4.37	5.50	-2.51	0.51	5.15	2.36	-1.13	8.18	9.31
Q4	4.86	4.89	0.76	0.69	2.78	0.67	-0.04	6.94	6.98

(Table 4: Contribution of Taiwan's GDP components to GDP growth in 2021. Source: Taiwan Ministry of Economic Affairs.)

As shown in Table 4, Taiwan's gross GDP growth rate in 2021 was 6.45%. The internal demand increased by 4.55%, which is not as fast as the GDP growth rate. The external net demand was 1.9%, but exports accounted for 9.89%. It can be seen that the export sector has contributed significantly to Taiwan's economic growth. There is a remarkable difference in economic growth between Q1 & Q2 and Q3 & Q4. In Q1 and Q2, both internal and external demand contributed considerably to the GDP growth. But in Q3 and Q4, Taiwan's external net demand shrank and its economic growth was mainly driven by domestic demand. It is because the growth rate of Taiwan's exports has declined, while the growth rate of imports has exceeded that of exports.

In Q1, private consumption still made some contribution to economic growth, but in Q2 and Q3, its contribution turned negative and did not resume growth until Q4. In 2021, Taiwan's private consumption shrunk by 0.18% year-on-year. Government consumption contributed very little to the economic growth, while investment contributed the largest. And the economic growth of Q4 was almost entirely driven by investment. Does this phenomenon indicate that consumption was sluggish in Q2 and Q3, or even in 2021? We need more data to answer this question.

According to industrial structure, GDP = the output value of agriculture, forestry, animal husbandry and fishery + the output value of industry + the output value of service. Taiwan's data is as follows:

			Ind	ustry				Ser	vice					
Yea r and Qua rter	Tot al	Agric ulture , forest ry, fisher y and anim al husba ndry		Min ing and min ing ind ustr y	Manuf acturin g	Hydro power gas and polluti on remed iation indust ry	Constr uction indust ry		Whol esale and retail	Transp ortatio n and wareho using	Informa tion and commu nication Industr y	Fina nce and insur ance	Re al est ate	Ot her s
201 9	100 .00	1.68	35. 46	0.06	30.96	1.77	2.66	62. 86	15.73	2.99	3.11	6.76	8.2	26. 05
Q1	100 .00	1.45	33. 94	0.06	29.73	1.33	2.82	64. 61	15.79	3.21	3.12	6.63	8.0 9	27. 76
Q2	100 .00	1.77	35. 74	0.06	31.16	1.78	2.74	62. 49	15.44	2.74	3.03	7.32	8.3 8	25. 58

Q3	100 .00	1.54	37. 66	0.06	32.66	2.43	2.51	60. 80	15.12	2.99	3.05	6.73	7.7 9	25. 11
Q4	100	1.96	34. 45	0.07	30.27	1.54	2.57	63. 59	16.55	3.02	3.21	6.37	8.6 4	25. 81
202 0	100	1.59	37. 12	0.06	32.07	2.09	2.89	61. 29	15.38	2.80	3.07	6.74	8.2	25. 10
Q1	100 .00	1.53	34. 70	0.07	30.11	1.51	3.02	63. 77	15.40	2.72	3.09	6.96	8.2	27. 38
Q2	100 .00	1.70	37. 47	0.07	32.22	2.16	3.02	60. 83	14.70	2.59	3.05	7.42	8.4 7	24. 60
Q3	100 .00	1.47	39. 34	0.06	33.68	2.76	2.84	59. 19	14.87	2.73	2.95	6.62	7.7 3	24. 31
Q4	100 .00	1.66	36. 81	0.07	32.12	1.89	2.73	61. 53	16.47	3.12	3.18	6.08	8.4 1	24. 28
202 1	100 .00	1.48	37. 95	0.05	32.88	1.69	3.33	60. 57	15.72	4.08	2.98	6.73	7.6 5	23. 41
Q1	100 .00	1.52	36. 52	0.06	31.49	1.64	3.34	61. 96	15.51	3.63	2.94	6.67	7.6 6	25. 55
Q2	100 .00	1.46	39. 11	0.06	33.78	1.91	3.35	59. 43	15.24	3.39	2.86	7.45	7.7 5	22. 74
Q3	100 .00	1.43	39. 85	0.05	34.34	2.00	3.46	58. 71	14.94	4.26	2.97	6.82	7.2 9	22. 42
Q4	100 .00	1.52	36. 42	0.06	31.96	1.24	3.17	62. 06	17.05	4.96	3.12	6.04	7.9 0	22. 99

(Table 5: Taiwan's GDP composition from Q1, 2019 to Q4, 2021 by industrial structure. Source: Taiwan Ministry of Economic Affairs.)

As shown in Table 5, in 2021, agriculture, forestry, animal husbandry and fishery contributed less than 2% to Taiwan's GDP, while industry contributed nearly 40% and service industry over 60%. It shows that Taiwan's economy is mainly contributed by the service sector, and the service industry is directly related to private consumption. The data in Tables 5 and 3 can show the significance of private consumption.

Among the various categories of industry, the manufacturing industry accounts for the largest proportion, which is 32.88% in 2021. The proportion of the manufacturing industry kept increasing from Q1 to Q3 in 2021 yet decreased in Q4. Manufacturing industry is directly related to foreign trade, and its trend is consistant with the trend of Taiwan's exports. The largest proportion of the service industry is "Others", followed by "Wholesale and retail". However, from Q1 to Q3 of 2021, the proportion of Taiwan's wholesale and retail industry was declining, from 15.51% to 14.94%. However, it suddenly "bottomed out"

and increased to 17.05% in Q4, which was a peak in 2021. This trend of change is consistent with the trend of private consumption that was sluggish in Q2 and Q3 but resumed growth in Q4, as shown in Table 4.

			Ind	ustry				Ser	vice					
Yea r and Qua rter	To tal	Agric ulture , forest ry, fisher y and anima I husba ndry		Mi nin g and mi nin g	Manufa cturing	Hydro power gas and polluti on remed iation	Constr uction		Whol esale and retail trade	Transp ortatio n and wareho using	Informa tion and commu nication Industry	Fina nce and insur ance	Re al est ate	Ot her s
201 9	3. 06	- 0.91	1.4	1.5 6	1.09	1.90	3.20	5.1 0	3.59	4.75	1.58	6.52	3.8	3.2
Q1	2. 05	- 0.23	- 1.1 8	1.5	- 1.96	3.45	2.49	5.0	2.83	3.31	0.69	4.78	- 0.1 3	2.7
Q2	2. 99	- 7.11	1.5 7	- 0.5 3	1.21	1.92	2.73	5.3	3.29	3.95	1.41	6.23	2.4	3.7
Q3	3. 43	- 0.52	2.4	- 0.3 6	2.49	- 0.01	3.21	3.5	3.91	5.93	2.05	7.09	5.2	2.8
Q4	3. 70	4.20	2.4	4.8 5	2.22	2.56	4.28	6.5	4.28	5.77	2.15	7.81	7.9 4	3.3
202 0	3. 36	- 1.56	7.0	0.6 7	7.37	2.62	4.21	5.4	1.24	4.75	- 19.48	4.73	5.7	2.7
Q1	2. 99	- 3.34	7.2 4	1.3	7.85	2.90	2.06	2.5	0.78	2.01	- 13.22	3.00	7.0	2.4
Q2	0. 63	0.54	3.9	3.2	4.06	0.37	4.32	4.0	1.33	0.17	- 26.19	3.96	4.8	1.4
Q3	4.	0.67	6.6	0.1	6.56	3.22	4.95	10. 07	2.14	6.46	- 19.57	3.25	6.6	3.0
Q4	5. 30	- 3.54	9.9	1.4	10.82	3.82	5.15	4.9	3.18	9.80	- 19.11	8.31	4.6	3.7

			8	3				1					8	6
202	6. 45	- 4.24	12. 82	3.0	13.88	3.77	8.49	3.0	4.12	- 4.57	7.64	9.96	1.8 8	1.2 9
Q1	9. 20	0.75	14. 89	2.4	16.11	3.96	0.82	9.7 5	6.26	11.86	- 7.09	6.74	9.9 0	3.6 4
Q2	7. 76	- 3.49	15. 55	4.0 7	16.92	6.26	2.64	8.4 7	4.24	6.02	4.74	6.88	12. 74	1.7
Q3	3. 70	- 2.33	11. 84	1.3 9	13.06	0.91	- 2.98	7.1 4	- 0.90	- 2.79	- 13.04	9.49	9.1	0.3 5
Q4	4. 86	- 10.11	9.5 9	3.8 8	10.23	3.36	8.74	2.5 5	1.86	- 1.46	7.31	7.32	1.8 3	2.1

(Table 6: Growth of each component of Taiwan's GDP from Q1, 2019 to Q4, 2021. Source: Taiwan Ministry of Economic Affairs.)

As shown in Table 6, the growth rate of industry was the fastest in 2021. The manufacturing sector even maintained a double-digit growth rate throughout the four quarters. This high growth rate, which is very rare in many years, surpassed the growth rate in most quarters of 2019 and 2020. Taiwan's manufacturing industry mainly serves the foreign trade sector, and its rapid growth is confirmed with the rapid growth of the foreign trade sector. The service industry grew rapidly in Q1 and Q2 of 2021. But it began to decline in Q3, and then dropped to 2.55% in Q4. Wholesale and retail trade grew by 4.12% in 2021, yet it shrank by 2.79% in Q3. The transportation and warehousing sector was sluggish throughout the year. This data can prove that the performance of Taiwan's economic and people's livelihood sector in 2021 is not satisfactory.

Year and Quarter	Economic growth rate	Agriculture, forestry, fishery and animal husbandry	Industry	Service
2021	6.45	- 0.07	4.77	1.84
Q1	9.20	0.01	5.25	3.94
Q2	7.76	- 0.06	5.78	2.57
Q3	4.37	- 0.04	4.62	- 0.42
Q4	4.86	- 0.17	3.56	1.56

(Table 7: Contribution of each component of Taiwan's GDP to its GDP growth from Q1 to Q4 of 2021 by industrial structure. Source: Taiwan Ministry of Economic Affairs.)

As shown in Table 7, Taiwan's economy in 2021 was mainly contributed by industry. Taiwan's economic growth in Q1 and Q2 was driven by both the industrial and service sector, while in Q3, the contribution of the service industry to the economy turned negative, and

the economy was driven by industry alone. However, the service sector rebounded in Q4 and turned from negative to positive.

3) The performance of Taiwan's service sector in 2021

Year and quarter	Annual growth rate of wholesale	Annual growth rate of retail	Annual growth rate of catering
2021	15.78	3.26	- 6.37
January	23.26	3.74	- 15.30
February	7.29	12.81	23.64
March	12.92	12.50	25.28
April	22.04	18.27	37.30
May	26.00	3.40	- 19.21
June	18.00	- 13.26	- 39.94
July	11.23	- 9.63	- 38.83
August	17.17	- 4.28	- 25.65
September	12.22	1.99	- 10.77
October	14.31	6.65	1.41
November	14.72	6.85	3.87
December	12.13	3.72	7.15

(Table 8: Taiwan's service industry turnover growth from January to December 2021. Source: Taiwan Ministry of Economic Affairs.)

Taiwan authorities provided more detailed data on the service sector. As shown in Table 8, in 2021, the turnover growth rate of Taiwan's wholesale industry was as high as 15.78%, the retail sector was 3.26%, yet the catering was in recession, shrinking by 6.37% year-on-year. The wholesale sector has maintained a high double-digit growth rate throughout the 12 months, of which the growth rate in May was as high as 26%. The retail sector was able to profit well in Q1 and Q2, and its growth rate in April was as high as 18.27%. However, the negative growth for 3 consecutive months since June shows that the sector was sluggish. Taiwan's catering sector maintained growth from February to April, declined from May to September, shrank by 39.94% year-on-year in June, and turned from negative to positive from October to December.

The timing of the recession in Taiwan's retail and catering industries in Q2 coincides with the timing of the COVID-19 outbreak in Taiwan in 2021. In mid-May, another wave of COVID-19 pandemic broke out in Taiwan. Taiwan authorities carried out strict pandemic prevention measures, and the retail and catering industries were directly affected. After July, when the pandemic was eased, the retail industry began to grow again, but the catering industry was still not out of recession. This may indicate that Taiwan people were severely impacted by

the pandemic and their lives were seriously affected. This is also reflected from the sluggishness of "private consumption" in Table 4 in Q2 and Q3.

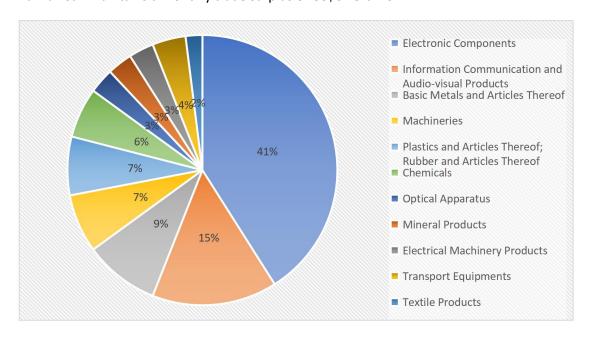
The growth trend of Taiwan's wholesale and retail industries diverged. Generally speaking, wholesale goods are digested through retail. However, Taiwan experienced rapid growth in wholesale but decline in retail sales. This either shows that Taiwan merchants like to stock up, or the wholesale products flow into other regions through foreign trade instead of flowing into the local society.

4) Taiwan's foreign trade in 2021

Year and quarter	Total trade value	Annual growth rate (%)	Total value of export trade	Annual growth rate (%)	Total value of import trade	Annual growth rate (%)
2019	614 809	- 0.6	329 157	- 1.5	285 651	0.3
2020	631 274	2.7	345 126	4.9	286 148	0.2
2021	827 873	31.1	446 379	29.3	381 494	33.3

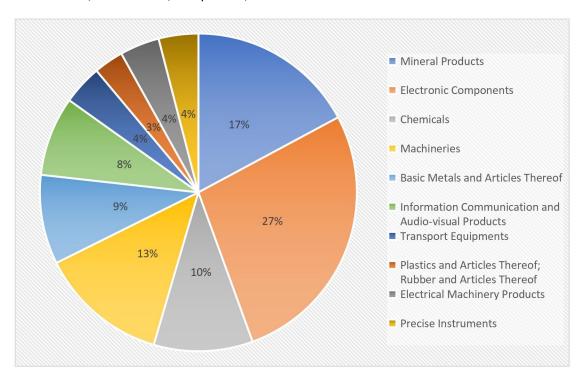
(Table 9: Taiwan's trade growth from 2019 to 2021, Unit: Million dollars. Source: Taiwan Ministry of Economic Affairs.)

As mentioned above, foreign trade greatly contributed to Taiwan's economic growth in 2021, which can be mutually confirmed with the data in Table 9. Taiwan's foreign trade was in decline in 2019 and it slightly increased in 2020. But 2021 was a very prosperous year, with a total foreign trade volume of about 827.9 billion US dollars, a year-on-year increase of 31.1%. Taiwan's imports and exports are both growing rapidly, with imports growing faster. But Taiwan still maintains a monthly trade surplus of US\$64.9 billion.



(Chart 2: Taiwan's export goods structure in 2021. Source: Taiwan Ministry of Economic Affairs.)

As shown in Chart 2, the largest proportion of Taiwan's exports in 2021 was electronic components, accounting for 41%, which are intermediate products. The second is information communication and audio-visual products, accounting for 15%, followed by basic metals, machineries, and plastics, all of which account for less than 10%.



(Chart 3: Taiwan's imported goods structure in 2021. Source: Taiwan Ministry of Economic Affairs.)

As shown in Chart 3, in 2021, Taiwan's largest imported goods are electronic components, accounting for 27%, followed by mineral products, accounting for 17%, and machineries, accounting for 13%. Then follows chemicals, basic metals, etc., all of which account for less than 10%. The largest volume of imported products in Taiwan is still intermediate products and primary products. In previous analysis, our Academy has pointed out that Taiwan's economy is in the middle position of the industrial chain of the Asia-Pacific and even the whole world. It imports primary products and intermediate products, processes them into intermediate products, and exports them to the assembly workshops in the mainland, and finally converts them into finished products to supply the world's consumer market. From the data of 2021, we can see that this pattern has not changed.

	Total The mainland and Hong Kong		The mainland		Hong Kong		The US		
Yea r	Annu al growt h rate	Compositi on ratio	Annu al growt h rate	Compositi on ratio	Annu al growt h rate	Compositi on ratio	Annu al growt h rate	Compositi on ratio	Annu al growt h rate
201 9	- 1.5	40.1	- 4.2	27.9	- 4.9	12.3	- 2.6	14.1	17.1
202 0	4.9	43.9	14.6	29.7	11.6	14.2	21.4	14.6	9.3

202 1	29.3	42.3	24.8	28.2	22.9	14.1	28.7	14.7	29.9
		Japan		Europe		ASEAN			
Yea r		Compositi on ratio	Annu al growt h rate	Compositi on ratio	Annu al growt h rate	Compositi on ratio	Annu al growt h rate		
201 9		7.1	2.1	9.0	- 4.8	16.4	- 7.2		
202 0		6.8	0.5	8.2	- 5.5	15.4	- 1.3		
202 1		6.5	24.8	8.6	36.7	15.7	32.0		

(Table 10: Annual growth rate and composition ratio of Taiwan's exports to major economies from 2019 to 2021. Source: Taiwan Ministry of Economic Affairs.)

As shown in Table 10, the distribution of Taiwan's export destination share is highly concentrated. The largest export destinations of goods were the mainland China and Hong Kong, together accounting for 42.3%, of which the mainland accounted for 28.2% followed by the Association of Southeast Asian Nations (ASEAN) countries, accounting for 15.7%. Taiwan's exports to the US accounted for 14.7%. The total proportion of Taiwan's exports to the US, Japan, Europe and ASEAN is equivalent to that to the mainland and Hong Kong, which shows that Taiwan's exports is highly dependent on the mainland market, and the strong demand of the mainland market is the main reason for the rapid growth of Taiwan's exports in 2021. In 2021, the growth rate of Taiwan's exports of goods was as high as 29.3%, and exports to all destinations experienced rapid growth. Among them, the growth rate of exports to the US was 29.9%, to ASEAN exceeded 32%, and to Europe was 36.7%, all exceeding 29.3%. This has led to a phenomenon: the proportion of Taiwan's exports to the US, ASEAN, and Europe has increased, while the proportion of exports to the mainland and Hong Kong has decreased.

	Total	The mainland Kong	and Hong	The mainland		Hong Kong		The US		
Year	Annual growth rate	Composition ratio	Annual growth rate	Composition ratio	Annual growth rate	Composition ratio	Annual growth rate	Composition ratio	Annual growth rate	
2019	0.3	20.5	5.9	20.1	6.7	0.4	-24.6	12.2	5.3	
2020	0.2	22.6	10.9	22.2	10.8	0.4	14.9	11.4	-6.7	
2021	33.3	22.1	29.9	21.6	29.7	0.4	39.9	10.3	20.4	
		Japan		Europe		ASEAN				
Year		Composition ratio	Annual growth rate	Composition ratio	Annual growth rate	Composition ratio	Annual growth rate			

2019	15.4	-0.2	12.8	5.6	12.2	1.2	
2020	16.0	4.2	12.9	0.7	12.5	2.7	
2021	14.7	22.2	12.4	28.5	12.4	31.5	

(Table 11: Origin of Taiwan's imports of goods from 2019 to 2021. Source: Taiwan Ministry of Economic Affairs.)

As shown in Table 11, Taiwan's major import sources have a relatively low level of concentration, with the mainland the highest, accounting for more than 20%, and the US, Japan, the EU, and ASEAN accounting for 10% to 15%. In 2021, the import of Taiwan goods from all over the world grew rapidly, among which the growth rate from Hong Kong was the highest, reaching 39.9%, and that from ASEAN was as high as 31.5%. The growth rate of imports from the mainland and Europe also reached 30%.

5) Summary

In 2021, Taiwan's economy grew rapidly, with nominal GDP increasing by 6.45% year-on-year, and per capita GNI reaching US\$33,638. Taiwan's economy has two engines, one is private consumption, and the other is foreign trade. In 2021, Taiwan's private consumption performance was lackluster. In Q2 and Q3, its retail and catering sector even declined. This shows that Taiwan people have not fully enjoyed the fruits of economic growth. In 2021, Taiwan's foreign trade sector performed well. With the strong support of the mainland, both imports and exports saw a double-digit high-speed growth, which also brought an effective growth of the manufacturing industry. This is the main factor behind the good performance of Taiwan's economy in 2021.

4. Diplomatic Dimension

4.1 Timeline of the Cross-Strait diplomatic events in 2021

On New Year's Day of 2021, after losing the presidential election, the Trump administration had only 20 days remaining in the White House. On January 9, the US Secretary of State Mike Pompeo announced the lifting of self-imposed restrictions on contacts between American and Taiwan's officials. Pompeo said that in the past few decades, the US took these restrictions and limited the level, scale and number of American officials visiting Taiwan in an attempt to appease the mainland government, and it won't happen anymore. The US Representative to the United Nations (USUN) Kelly Craft planned to visit Taiwan between January 13th to 15th. If it worked, she would be the first USUN who had visited Taiwan since 1978. Before that, in September 2020, Craft's meeting with Taipei's Economic and Cultural Office Director Lee Kuang-Jung has been called a "historic" moment. But eventually, Craft didn't pay her visit to Taiwan since the US State Department announced that all visiting plans were canceled.⁷⁵

On January 17, the US think tank Council on Foreign Relations released a report saying that military conflicts in the Taiwan Strait may break out in 2021. ⁷⁶On January 20, Democratic Joe Biden administration took office. On January 23, new Secretary of State Antony Blinken supported Taiwan and asked the mainland to stop putting pressure on Taiwan, saying that the US would continue to help Taiwan build "sufficient self-defense capabilities." Blinken also called for "meaningful dialogue" across the Strait. Taiwan's foreign affairs department thanked the US for its remarks. ⁷⁷ Blinken's remark "set a tone" for the Biden administration's Taiwan policy, which shows that the new US administration's Taiwan policy does not fundamentally change.

On February 4, the Ministry of Foreign Affairs of the Taiwan authorities claimed to have signed an agreement with Guyana to establish a Taiwan Office with "official representative status". The mainland protested and urged Guyana to "correct its mistakes". In less than 24 hours, Guyana announced the termination of the agreement. Leader of Taiwan authorities Tsai Ing-wen expressed regret.⁷⁸

On February 10, Bi-khim Hsiao, Taiwan's Representative to the US entered the US State Department to meet with Sung Kim, the Acting Assistant Secretary of State who is in charge of Asia-Pacific Affairs. The US said it was deepening relations with Taiwan.⁷⁹

⁷⁵ https://www.voachinese.com/a/US-pompeo-craft-taiwan-20210112/5734802.html

⁷⁶ https://www.voachinese.com/a/CFR-severe-crisis-between-us-china-over-taiwan-rose-to-tier-1/5740269.html

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⁷⁸ https://www.rfi.fr/cn/%E6%B8%AF%E6%BE%B3%E5%8F%B0/20210205-

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⁷⁹ https://www.rfi.fr/cn/%E4%B8%AD%E5%9B%BD/20210212-

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On February 10, Chinese President Xi Jinping spoke with the US President Joe Biden on the phone, during which they mentioned the Taiwan issue. Xi said that the Taiwan issue is China's internal affairs and asked the US to respect China's core interests. Biden expressed concerns over China's increasingly assertive stance on Taiwan.⁸⁰

On February 22, Chinese Ambassador to the US Cui Tiankai said that on the Taiwan issue and other issues involving China's sovereignty and territorial integrity, China has no room for concessions and must stick to the red line.⁸¹

On March 4, the then Prime Minister of Japan Yoshihide Suga appreciated Taiwan's pandemic prevention work and expressed support for Taiwan's attempt to join the World Health Organization (WHO).⁸²

From March 18 to 19, the China-US high-level strategic dialogue was held in Anchorage, Alaska. Yang Jiechi, Director of the Central Foreign Affairs Commission General Office of the CPC and Foreign Minister Wang Yi attended the dialogue together with the US Secretary of State Blinken and National Security Advisor Jake Sullivan. Considering the big differences between two sides, China clearly stated that the Taiwan Issue is China's core interests and there is no room for compromise. The US reiterated its adherence to the "One-China Policy".83

On March 25, the US and Taiwan signed a Memorandum of Understanding (MoU) to establish a coast guard working group to coordinate bilateral policy. The US Coast Guard and Taiwan Coast Guard strengthened their cooperation. Media pointed out that this is a reaction to the "Coast Guard Law" passed by the mainland in January.⁸⁴

On March 28, the new president of Palau Surangel Whipps Jr. visited Taiwan, accompanied by the US ambassador to Palau, John Hennessey-Niland.⁸⁵

On April 9, the US State Department released new guidelines for interactions with Taiwan counterparts, saying "to encourage U.S. government engagement with Taiwan that reflects our deepening unofficial relationship". 86On April 11, US Secretary of State Blinken expressed his "concern" on the mainland's "aggression" against Taiwan. 87

On April 16, the then Japanese Prime Minister Yoshihide Suga visited the US and issued a joint statement with US President Joe Biden, in which he emphasized "the importance of peace and stability in the Taiwan Strait". This is the first time since 1969 that leaders of Japan and the US mentioned the Taiwan issue in a joint statement. China's Embassy in the US expressed strong opposition against the statement. On April 21, Yoshihide Suga stated in the Japanese Parliament that his commitment to Taiwan "does not presuppose military participation", saying that Japan will not interfere with the situation across the Strait by

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⁸⁰ https://www.bbc.com/zhongwen/simp/world-56021020

⁸¹ https://www.reuters.com/article/china-stance-usa-0222-mon-idCNKBS2AM05L

⁸² https://www.cna.com.tw/news/firstnews/202103040328.aspx

⁸³ https://www.chinatimes.com/realtimenews/20210320001571-260409?chdtv

⁸⁵ https://www.rfi.fr/cn/%E6%94%BF%E6%B2%BB/20210328-

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⁸⁶ https://www.voachinese.com/a/US-Taiwan-new-guidelines-20210409/5847532.html

⁸⁷ https://cn.reuters.com/article/usa-taiwan-china-0411-sun-idCNKBS2BZ012

military force.88

On May 4, the White House Indo-Pacific Affairs Officer Kurt Campbell stated that the US is not willing to defend Taiwan when China attacks. The States prefers to maintain the status quo.⁸⁹

On May 7, US Secretary of State Blinken called for the restoration of Taiwan's proper status in WHO and Taiwan's participation in the World Health Assembly on 24th. However, Taiwan was not invited. That is the fifth year that Taiwan has not been able to participate in the World Health Assembly.

On June 6, three US senators visited Taiwan by an Air Force C-17 transport plane, saying that the US would donate 750,000 doses of vaccines. 90 The total amount then increased to 2.5 million and arrived in Taiwan on June 20.91

On June 9, Japan's then Prime Minister Yoshihide Suga called Taiwan a "country" when discussing pandemic prevention issues. On 11th, Chief Cabinet Secretary of Japan Katsunobu Kato said that Japan's policy toward Taiwan has not changed, and it is still based on the 1972 Japan—China Joint Communiqué. 92

On June 22, Lithuania announced that it would donate 20,000 doses of AstraZeneca vaccines to Taiwan. Taiwan authorities expressed their gratitude.⁹³

On June 24, Hong Kong's Apple Daily was shut down because its funds were frozen by the Hong Kong government. Tsai Ing-wen expressed regret on Facebook.⁹⁴

On June 24, Japan's Minister of Defense Kishi Nobuo stated that Taiwan's security is directly related to Japan's security. ⁹⁵On 25th, Japan's Minister of Foreign Affairs Motegi Toshimitsu said that they would donate one million more doses of AstraZeneca vaccines to Taiwan. ⁹⁶On 28th, Japan's Deputy Ministry of Defense Nakayama Yasuhide participated in an online event held by American think tank Hudson Institute. When discussing the Taiwan issue, Nakayama Yasuhide called Taiwan a "country" that "we must protect". ⁹⁷

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 $^{^{\}rm 90}$ https://www.bbc.com/zhongwen/simp/chinese-news-57382359

⁹¹ https://www.bbc.com/zhongwen/trad/57559209

⁹³ https://udn.com/news/story/120912/5559133

⁹⁴ https://www.rfa.org/mandarin/yataibaodao/gangtai/hcm0624a-06242021055445.html

⁹⁶ https://www.cna.com.tw/news/firstnews/202106255002.aspx

⁹⁷ https://www.cna.com.tw/news/firstnews/202106290022.aspx

On July 1, Lithuanian Foreign Minister Gabrielius Landsbergis announced the establishment of a representative office in Taiwan. Later, Jaushieh Joseph Wu, head of Taiwan's foreign affairs department, said that Taiwan would also set up a representative office in Lithuania. The mainland expressed strong protest and announced the recall of the ambassador to Lithuania on August 10.

On July 5, Deputy Prime Minister of Japan Aso Taro said that if China attacks Taiwan, it may trigger a crisis that "threatens the existence of Japan". Japan should exercise its limited right of collective self-defense, and "the US and Japan should jointly defend Taiwan". ⁹⁸

On September 1, the European Parliament's Committee on Foreign Affairs passed the first EU-Taiwan Political Relations and Cooperation Report, advocating that the EU and Taiwan should develop closer relations under "One-China Principle". The European Parliament passed an amendment to the report on the same day, proposing that the EU's "European Economic and Trade Office" in Taiwan be renamed as "European Union Office in Taipei".⁹⁹

On September 22, Japanese Foreign Minister Motegi Toshimitsu welcomed Taiwan's application to join the CPTPP.

On October 21, US President Biden said on a CNN program that if Taiwan is attacked, the US will defend Taiwan in accordance with its "promise". The White House later said that the long-term US policy toward Taiwan has not changed. 100

On October 26, the US State Department issued a statement supporting Taiwan's membership in the UN system, including the International Civil Aviation Organization and the World Health Assembly.¹⁰¹

On November 3, a delegation of the European Parliament visited Taiwan and met with the leader of the Taiwan authorities Tsai Ing-wen. This is the first time the European Parliament has sent an official delegation to Taiwan. Members of the European Parliament said they want to learn from Taiwan's experience in "fighting" against the "fake news" and "cyberattacks" of the mainland. 102

On November 16, Chinese President Xi Jinping held a video conference with US President Joe Biden. The two sides discussed the Taiwan issue. China reiterated the position of "peaceful reunification", but clearly emphasized that if the "Taiwan independence" separatists forces break through the red line, China "will have to take decisive measures". The US side said it abides by its policy toward Taiwan based on the Taiwan Relations Act, the Three Joint Communiqués and the "Six Assurances". ¹⁰³

On November 18, Taiwan's Ministry of Foreign Affairs said that The Taiwanese

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⁹⁸ https://www.rfa.org/mandarin/yataibaodao/gangtai/hcm0706a-07062021051737.html

¹⁰⁰ https://edition.cnn.com/2021/10/21/politics/taiwan-china-biden-town-hall/index.html

¹⁰¹ https://www.state.gov/supporting-taiwans-participation-in-the-un-system/

¹⁰² https://www.rfi.fr/cn/%E6%AC%A7%E6%B4%B2/20211110-

¹⁰³ https://www.bbc.com/zhongwen/simp/world-59301487

Representative Office in Lithuania was officially put into operation. The mainland accused Lithuania of "blatantly violating the One-China principle". ¹⁰⁴ On 19th, China's Ministry of Foreign Affairs announced that the diplomatic relations between China and Lithuania were downgraded to the charge d'affaires level.

On November 25, 5 US congressmen visited Taiwan. Michigan Democratic Rep. Ellisa Slotkin said the Chinese embassy in the US had asked them to cancel the trip, but they insisted on visiting. ¹⁰⁵ South Carolina Republican Rep. Nancy Mace called Taiwan the "Republic of Taiwan" on social media. ¹⁰⁶

On December 5, Slovakia's Deputy Economy Minister Karol Galek led a delegation to visit Taiwan. 107

On December 10, Taiwan was invited to participate in the Democracy Summit hosted by the United States. When Audrey Tang, head of Taiwan's Ministry of Information, was speaking online, the screen was cut off, leaving only her voice. Media believed that Tang was blocked by the White House because the color of Taiwan on the Asian map she used was different from that of the mainland, which may not conform to the "One-China" principle. 108

On December 15, former speaker of the French National Assembly François de Rugy led a six-member delegation to visit Taiwan.¹⁰⁹

4.2 Features: Review on Taiwan Relations Act

The US policy toward Taiwan often seems inconsistent and self-conflicting. On the one hand, the US officials at all levels have repeatedly expressed their support for the "One-China Principle" in public. On the other hand, the US has never stopped providing assistance to the Taiwan authorities and provoking Cross-Strait relations, constantly challenging China's bottom line. This contradiction was highly reflected in the Democracy Summit held in December 2021. On the one hand, the US insisted on inviting Taiwan to participate the summit, regardless of China's strong opposition; on the other hand, when the representative

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¹⁰⁸ https://www.voachinese.com/a/us-taiwan-map-20211212/6351696.html

¹⁰⁹ https://www.rfi.fr/cn/%E6%B8%AF%E6%BE%B3%E5%8F%B0/20211215-

of Taiwan spoke online, the US was worried about the map of China displayed by Taiwan and directly cuts off the video signal because it does not comply with the "One-China Principle".

The legislation source of such contradictions is the Taiwan Relations Act (Public Law: 96-8). This law, passed by the Jimmy Carter administration in 1979, is the foundation of the US' policy toward Taiwan. ¹¹⁰ It sets out the so-called "commitments" of the US to Taiwan and also draws boundaries on what the US government can do. Following is an analysis of the text of the law by the China Cross-Straits Academy (Hong Kong):

1) How does the US define the legal status of Taiwan?

The Taiwan Relations Act is a legal document, which should be serious, clear, and accurate, and without ambiguity. But the reality is that this law does not use accurate language to define Taiwan's legal status. Is Taiwan a "sovereign independent state" or a part of China? The law does not answer this question.

Section 4(b)(2) of the Act refers to the government of Taiwan as "governing authorities", which was "recognized as the Republic of China" prior to January 1, 1979. This Section is a complete statement, which clearly "recognized" the sovereignty and ruling status of the "Republic of China" prior to January 1, 1979. ¹¹¹ But how should the legal status of Taiwan be determined after the Act took effect?

Section 2 of the Act clarifies that the US has terminated "governmental relations" between the US and the governing authorities on Taiwan, and Section 4(b)(5) also points out the "absence of diplomatic relations and recognition" between Taiwan and the US, ¹¹² but Section 4(a) also emphasizes that "the absence of diplomatic relations or recognition shall not affect the application of the laws of the United States with respect to Taiwan, and the laws of the United States shall apply with respect to Taiwan in the manner that the laws of the United States applied with respect to Taiwan prior to January 1, 1979". ¹¹³ It means that, on the one hand, the US "recognizes" the absence of "diplomatic relations" between it and Taiwan, and it does not recognize the existence of diplomatic relations between the US and Taiwan, no matter Taiwan is a "sovereign state" or not; On the other hand, the US deliberately leaves room for the continued interaction with Taiwan under the pretext that "US laws shall apply to Taiwan". Then, what is the relationship between the US and Taiwan?

The Taiwan Relations Act does not use precise legal words to define the relationship between the US and Taiwan. First, the Act only defines the "non-explicit relations" between the US and Taiwan. In other words, it only defines what the relationship is not. The Act stipulates that US-Taiwan relations are neither "governmental relations" nor "diplomatic relations". Second, the Act stipulates what the US is entitled to do. Section 2 stipulates that the US needs to develop "friendly commercial, cultural, and other relations" with Taiwan, and the US needs to provide Taiwan with arms of a defensive character. More than that, the Act points out that the stability of the Taiwan Strait is of paramount importance to the US interests. The US considers "any effort to determine the future of Taiwan by other than peaceful means" "a threat" to the peace and security of the Western Pacific area and of

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¹¹⁰ https://www.congress.gov/bill/96th-congress/house-bill/2479/text

¹¹¹ The President having terminated governmental relations between the United States and the governing authorities on Taiwan recognized by the United States as the Republic of China prior to January 1, 1979

¹¹² the absence of diplomatic relations between the people on Taiwan and the United States, or the lack of recognition by the United States

¹¹³ The absence of diplomatic relations or recognition shall not affect the application of the laws of the United States with respect to Taiwan, and the laws of the United States shall apply with respect to Taiwan in the manner that the laws of the United States applied with respect to Taiwan prior to January 1, 1979.

"grave concern" to the US. The US itself needs to maintain the capacity to "resist any resort to force or other forms of coercion that would jeopardize the security, or the social or economic system, of the people on Taiwan". The US hopes that the Taiwan issue can be resolved peacefully.

How do we interpret this relationship? It is obviously not a "governmental relationship," but it is something similar. In fact, Section 4 (b)(1) of the Act provides that whenever the laws of the US refer or relate to "foreign countries, nations, states, governments, or similar entities", such laws shall apply with such respect to Taiwan. ¹¹⁴ These laws involve various aspects such as international commerce, immigration, and criminal proceedings. All treaties between the US and Taiwan remain in force, except for those annulled by legislation. It can be seen that this Act gives Taiwan a "governmental-like relations" treatment.

2) What kind of organization is the American Institute of Taiwan?

Section 6 of the Act stipulates that American Institute of Taiwan (AIT) is a "nonprofit corporation incorporated under the laws of the District of Columbia", and a "nongovernmental entity". However, this "non-governmental organization" needs to be established by Congressional legislation; its members need to be designated by the President. It is funded by the US government and its appropriation is dependent on the State Department, which is in charge of foreign affairs. Its role includes handling Taiwan-related affairs of the US president and government departments.

This involves another serious question: what is the nature of the AIT staff? Are they US government officials, or even "diplomatic officials"? The Act has relatively clear provisions on this, saying that AIT staff cannot be government personnel. If they previously worked in a government department, they must quit the previous department when they work for AIT. In contrast, the US Embassy and Consulates in China are the subordinate agencies of the US State Department, and their personnel are also employees of the State Department. The law stipulates that when an American government employee works at AIT, they will be removed from the original working place. If they later return to work in a government department, the time he has worked at AIT shall be recorded as his seniority, with their "rights, privileges, and benefits...would have had or acquired had he or she not been so separated".

It can be seen that AIT is not a "government agency", but is performing the functions of a foreign affairs agency. The agency's staff, who are not "government personnel", also receive similar treatment.

3) Has the US committed to protect Taiwan by force?

There is no item in the Taiwan Relations Act that says the US is committed to protecting Taiwan by force, or could be read as such. The provision in the Act that refers to US security concerns about Taiwan is Section 3(c), which states that if Taiwan is threatened, the US President should report to the Congress and then determine to take "appropriate action" in response to any "such danger".

What is an "appropriate action"? Does it include armed forces? Combined with Section 2(6), the US itself needs to maintain the capacity to resist "any resort to force or other forms of coercion that would jeopardize the security, or the social or economic system, of the people on Taiwan." Is it a US military commitment to Taiwan?

¹¹⁴ Whenever the laws of the United States refer or relate to foreign countries, nations, states, governments, or similar entities, such terms shall include and such laws shall apply with respect to Taiwan.

The Academy believes that it cannot be interpreted this way. The so-called "appropriate action" does not specify as military measures, and the so-called "capacity" does not specify as military capabilities. What's more, there is no provision saying that the US must use this "capability" as an "appropriate action" to maintain Taiwan's security.

In contrast, NATO, led by the US, clearly stipulates the use of military force for "collective defense". Article 5 of the North Atlantic Treaty¹¹⁵ stipulates that "an armed attack against one or more of the Parties to this Treaty in Europe or North America shall be considered an attack against them all", and "each of them will assist the Party or Parties so attacked" and will take "all mean it deems necessary" to respond, "including the use of armed force" "to restore and maintain the security of the North Atlantic area".

Expressions like "each of the Parties will assist" and "including the use of armed force" are very crucial. They constitute a binding treaty obligation to act, clearly stating that action, including the use of armed force, must be undertaken. After the 9/11 terrorist attacks, Article 5 was activated, and the NATO coalition force joined the US military in Afghanistan War. Article 5 is the cornerstone of NATO's "collective defense". If this Article does not exist, NATO's defense mechanism is nothing but empty talk, because the Parties to this Treaty can "lawfully" stand by in times of crisis. The so-called "appropriate action" does not stipulate such treaty obligations. Neither does it stipulate that the US must assist Taiwan in the event of a crisis, nor does the US need to use the military.

Take the Treaty of Mutual Cooperation and Security between the US and Japan as an example. ARTICLE V stipulates that if any party is attacked in the territories under the administration of Japan, the Parties will "act to meet the common danger". ¹¹⁶ What does the "act" mean here? The expression is actually vague as well. Yet given that the US maintains a military presence as well as multiple military bases in Japan, if Japan is attacked, there is a high probability that the US military will be involed in operations to defend Japan's security. On January 20, 2021, the US State Department issued a statement interpreting and committing themselves on "Japan-US Security Treaty" and stated "the United States' unwavering commitment to the defense of Japan". ¹¹⁷ Therefore, the "act" in the treaty was interpreted as "US commitment to Japan's defense" in the official context.

In 1954, the Sino-American Mutual Defense Treaty also had the same provisions. Its Article 5 stipulated that if either Party were attacked in the Western Pacific Region, the Parties needed to "act to meet the common danger". ¹¹⁸ After signing the treaty, the United States Taiwan Defense Command was established, and the US maintained a military presence in Taiwan. With the establishment of diplomatic relations between China and the US, the Mutual Defense Treaty was terminated in 1980, the headquarters of the Defense Command was canceled, and the US military withdrew from Taiwan. It can be seen that between 1954 and 1980, the US had a "commitment" to Taiwan's defense, similar to its "commitment" to Japan.

The Academy believes that, in terms of text, the US has a treaty obligation with NATO countries to use armed forces, and the text of the North Atlantic Treaty has the clearest expression and the strongest tone. The next-leveled text is the "act" in the Treaty of Mutual Cooperation and Security, which is not a treaty obligation to send troops, but can be interpreted as "a commitment to defense". "Appropriate action" or maintaining a certain

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¹¹⁵ https://www.nato.int/cps/en/natolive/official_texts_17120.htm

¹¹⁶ https://www.mofa.go.jp/region/n-america/us/q&a/ref/1.html

¹¹⁷ https://www.state.gov/u-s-security-cooperation-with-japan/

¹¹⁸ https://avalon.law.yale.edu/20th century/chin001.asp

"capacity" in the Taiwan Relations Act is the least clear in meaning and the least tough in tone. The absence of key expressions such as "including the use of armed force" makes it neither a treaty obligation nor a "commitment to defense". The US once had a similar commitment to Taiwan, but terminated it after 1980. Therefore, at the present stage, the US has not promised to use force to protect Taiwan. If there is a "crisis" in the Taiwan Strait, the US military can either send military forces or not. It all depends on the considerations of the US policymakers at that specific time, but not law-binding requirements.

4) Summary

All in all, the text of The Taiwan Relations Act is unclear, and it deliberately obscures some important issues such as Taiwan's legal status and the nature of US-Taiwan relations, which objectively reflects that the US has never really "recognized" the "One-China Principle", and its so-called "One-China Policy" is nothing but the product of compromise. When the Act came into effect, the joint Communiqué between the US and China on the establishment of diplomatic relations had been issued, and the US government announced that it "acknowledges" the One-China Principle. ¹¹⁹ The choice of wording also reflects the attitude of the US towards the "One-China Principle", because it can be understood as either "accept as true" or as "received it", that is, the US either "recognizes" or just "knows" that the Chinese government's position is "there is only one China in the world, the People's Republic of China is the only government that represents China, and Taiwan is a part of China". The semantics here are also unclear.

The Taiwan Relations Act continues the practice of the Sino-US Joint Communiqué. While stipulating that the relationship between the US and Taiwan is not "governmental relations" or "diplomatic relations", it allows the US to develop extensive ties with Taiwan, and even to sell arms to Taiwan. AIT is not an official institution, but it performs the functions of the official departments. Although the US has not made a clear commitment to protect Taiwan by force, it has emphasized that "the United States itself needs to maintain the capacity" and opposes changing the current situation in the Taiwan Strait.

However, it is such an Act with deliberately obscured content that becomes the foundation of the current US-Taiwan interaction, and its symbolic fissure will naturally lead to various contradictions when the US handles the Taiwan issue. Former US presidents have all approved arms sales to Taiwan because they were in line with the Taiwan Relations Act. At the same time, they firmly opposed the Taiwan authorities' unilateral declaration of "Formal Taiwan Independence", because it would violate this law while destabilizing the stable situation of Western Pacific. The US government can invite Taiwan representatives to participate in itsevent, but it must cut off the live broadcast while Taiwan representatives showed up, because this violated the "acknowledgement" of the "One-China Principle" made by the US, and cutting off the live broadcast did not violate the Taiwan Relations Act.

When having an understanding of this, it can be seen what the US government can and cannot do. Regardless of the frequent interactions between the US and the Taiwan authorities and their changing expressions, the Taiwan authorities should also be soberly aware that the bill leaves enough space for the US to "lawfully" stand by and watch the "Taiwan Strait crisis", so the authorities must not have too many illusions about the US.

¹¹⁹ https://history.state.gov/historicaldocuments/frus1969-76v17/d203

5. Conclusion of Cross-Strait relations in 2021

In summary, China Cross-Strait Academy (Hong Kong) believes that the Taiwan Strait continued to develop in an unstable direction in 2021, which is consistent with the judgment made by the Cross-Strait Relations Risk Index. Political relations between mainland China and Taiwan were further deteriorating, and the risk of having conflicts in the Strait continued to rise.

From a political point of view, in 2021, the Taiwan authorities went further and further on the road of "Formal Taiwan Independence", which has been illustrated by the new version of Taiwan's "passport" in January and the so-called "non-subordination" put forward by Taiwan leader Tsai Ing-wen. The Taiwan authorities hoped to cut off legal ties with the mainland through various means, and have repeatedly stated in public that Taiwan is a "sovereign country".

In 2021, mainland China was actively promoting Cross-Strait integration. On the one hand, the relevant departments and leaders of the mainland have publicly stated their adherence to "Peaceful Reunification and One Country, Two Systems", and at the same time warned the Taiwan authorities and the "Taiwan independence" separatists forces not to act recklessly. On the other hand, the mainland also worked hard to promote the construction of specific systems for integration to prepare for post-integration governance.

In the military field, Taiwan was in a subordinated position in the Cross-Strait military confrontation, while the confrontation between the mainland and the US was dominant. The US kept a carrier strike group in the Western Pacific region all year round, that is, the USS Ronald Reagan (CVN-76) and the strike group, of which the home port was in Yokosuka, Japan, plus an amphibious strike group stationed at the Sasebo base in Japan, which consisted of USS America (LHA-6) and a strike group. VMFA-122 Squadron, which was equipped with the F-35B, was deployed in the USS America. In August 2021, the USS Carl Vinsonand strike group came to the Western Pacific, and this warship deployed VFA-147 squadron which was equipped with F-35C fighter jets. This means that since August 2021, the US has maintained the combat power of two aircraft carrier strike groups and one amphibious strike group in the Western Pacific region, and can deliver powerful carrier-based aircraft armed forces of seven fourth-generation aircraft squadrons and two fifthgeneration aircraft squadrons. At the same time, the US Navy crossed the Taiwan Strait almost every month, and the number and frequency were close to those of 2020 when Trump was still in office.

As a response to the US deployment of enormous naval and air forces in the Western Pacific, mainland China has created an A2/AD system. In 2020, the DF-17 medium-range ballistic missile entered service, which was the first hypersonic weapon in service in China. Given that the US has not yet had a hypersonic weapon in service, China has a temporary advantage in this regard. The US is stepping up the development of hypersonic weapons.

In terms of economic and trade, Taiwan has maintained a goodeconomic growth rate. Under the strong support of the huge demand from mainland China, Taiwan's foreign trade sector has grown rapidly, which is the main driving force of economic growth and has led to the rapid growth of the manufacturing industry. However, the benefits the public obtained from it were limited. In 2021, Taiwan's domestic demand didn't look good, private consumption was sluggish, and even a recession occurred in the second and third quarters, which have led to a sluggish state of Taiwan's service industry.

In the first 11 months of 2021, Taiwan's total import and export value has exceeded the total value of 2020, with a growth rate of 31.7%. This is a positive situation not seen in many years. This is mainly due to the rapid development of imports and exports between Taiwan and mainland, and also reflects that the political confrontation has not impacted the heat of Cross-Strait trade.

Finally, in the foreign affairs, the US and Japan both had their new administration in 2021, but they generally continued the previous Taiwan policies. The Biden administration in the US, while verbally supporting the "One-China Policy", continued to strengthen its interaction with the Taiwan authorities. In 2021, several high-level US officials visited Taiwan. In addition, Lithuania and other countries were also involved in Cross-Strait relations, so there is a risk that the "internationalization" of the Taiwan Strait issue will increase.

After analyzing the text of The Taiwan Relations Act, the Academy believes that the US has no explicit treaty obligation to "defend" Taiwan. While US politicians have made some verbal commitments to Taiwan, these commitments are significantly different from treaty obligations such as NATO's "Collective Defense" obligations.

All in all, in 2021, the political relationship between the two sides of the Strait continued to deteriorate and the military confrontation still existed. Taiwan was still actively seeking the support from countries outside the region, and the US was still giving such support. "The rising buckle the trend" of the Cross-Strait trade is the only highlight in the relationship between two sides of the Strait, which means that Taiwan's economic dependence on the mainland has not changed. The China Cross-Strait Academy (Hong Kong) hopes that the Cross-Strait relations can develop peacefully and friendly, but its premise is that the Taiwan authorities can abandon their illusions and have a clear vision of the current situation. After all, realizing Cross-Strait integration is the only way to maintain long-term peace, stability and prosperity between two sides of the Strait.