

INDSR Newsletter



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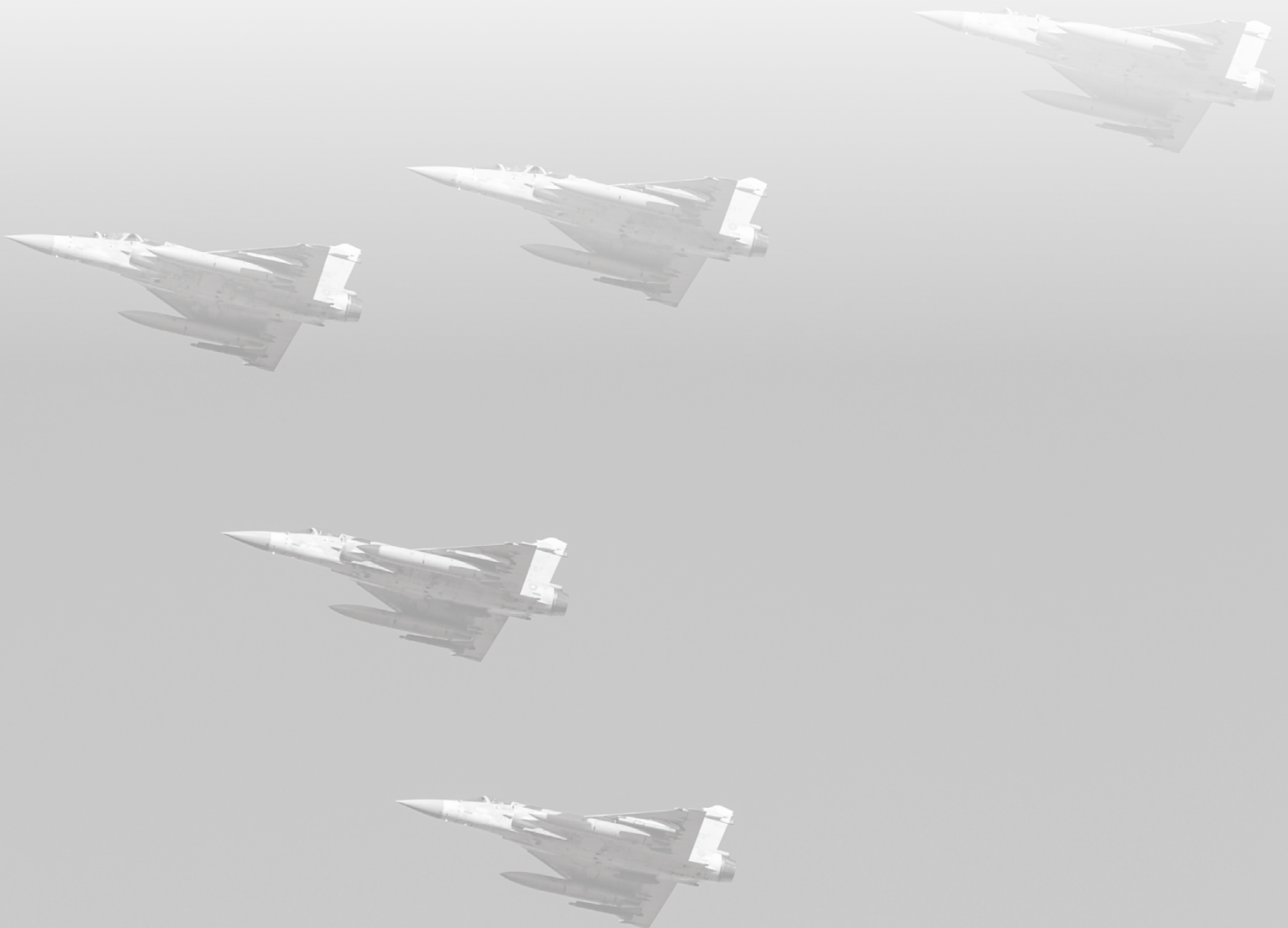
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An Analysis of PLAN Fujian Aircraft Carrier Overall Operational Capabilities

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Topics: PLA, Military Technology

1. News Highlights

On June 17, 2022, China's *CCTV* news reported the naming ceremony for the Chinese Navy's third aircraft carrier, held at 11 a.m. at the Jiangnan Shipyard of the China Shipbuilding Group, with the presence of Xu Qiliang, Vice Chairman of the Central Military Commission, Dong Jun, Commander of the PLA Navy, and Yuan Zhihua, the Navy Political Commissar. Claimed to be "China's first completely self-designed aircraft carrier," the newly built carrier was given the name "Fujian" and the pennant number "18."¹ With a displacement of more than 80,000 tons, Fujian is equipped with an electromagnetic aircraft launch system (EMALS) and an integrated power system (IPS), which signify that China's military

shipbuilding technology is now on par with advanced Western countries. *CCTV* news reported that Fujian will perform berthing and sea trials as planned after its launch. According to the estimation of some US media, Fujian is expected to join the PLA naval fleet operations in 2024, and the carrier-operated aircraft and early warning aircraft under development will be deployed at that time, epitomizing China's entrance to a new era of carrier combat capability.

2. Security Implications

2-1. Electromagnetic catapults enhance Fujian's overall combat capability

The PLA Navy's previous carriers, Liaoning and Shandong, both employed

1. Lin Zeh-Hong and Liao Shi-Feng, "Fujian Launched as China Enters the Era of Three Aircraft Carriers," *UDN News*, 18 June 2022, <https://udn.com/news/story/7331/6397020>.

a ski-jump deck that provides extra lift to the launching aircraft through the upward raised deck. However, due to physical constraints, the aircraft's takeoff weight is limited. The design hinders the deployment of heavy or slower aircraft and indirectly restricts the fuel and ammunition payloads, thus affecting range and striking power considerably. To get beyond the inherent limitations of ski-jump decks, the PLA Navy decided to develop an EMALS and deploy it on the newly-built Fujian aircraft carrier. This EMALS has the following advantages over the traditional steam catapult used by the US Navy: the smooth acceleration of linear motors, instead of steam pistons, reduces damage to the aircraft. The system has a simpler mechanism that takes up less space, which reduces operating and maintenance costs. The operations can be quickly prepared for high readiness, and the electrical power output can be adjusted for different catapult speeds required by different aircraft ranging from large

AWACS to small drones.² Thanks to the EMALS, Fujian has the better operational capability and combat flexibility than the previous two carriers.

2-2. IPS gives Fujian better adaptability and survivability

The Fujian is powered by an integrated power system (IPS), also known as integrated full-electric propulsion (IFEP), the latest propulsion system commonly seen in the navies of advanced countries.³ For instance, the Zumwalt class (DDG-1000) missile destroyers of the US Navy and the Queen Elizabeth class carriers of the British Navy use IPS for propulsion. With IPS, Fujian integrates the power for propulsion and other operations in one. The two are interchangeable when necessary to solve the power shortage problem in the future deployment of energy weapons or simultaneous operations of high-power equipment. The IPS allows the elimination of reduction gears to reduce

2. Azeem Singh Kahlon, Taavishe Gupta, Pooja Dahiya, Sudhir Kumar Chaturvedi, "A Brief Review on Electromagnetic Aircraft Launch System," *International Journal of Mechanical And Production Engineering*, Volume 5, Issue 6, Jun 2017, p. 63.

3. Raymond McConoly, "Type 003 to be the Most Powerful Aircraft Carrier of China," *Naval Post*, October 31, 2021, <https://navalpost.com/type-003-most-powerful-aircraft-carrier-of-china/>.

the mechanical vibration and radiated noise generated by the hull, which effectively improves Fujian's stealthiness and the chance of being detected by enemy sensors. Since the power comes from a decentralized structure, the critical shipboard systems can be quickly restored when Fujian sustains battle damage.⁴ Therefore, with the IPS, Fujian has a better battlefield survival chance and damage control capability than the previous Liaoning and Shandong carriers.

3. Trend Observation

3-1. Fujian is yet to pose a threat to the US Navy in the short term

Due to the conventional propulsion system, the range and endurance of the Fujian are far less than that of the US Navy's nuclear-powered carriers. Even so, Fujian's massive displacement and deck area still allow for more fuel, ammunition, supplies, and aircraft than Liaoning and Shandong, and its range of operations and combat area could be extended considerably. In the future, as the PLA Navy deploys a new generation

of powerful warplanes, such as fighters/attackers, AWACS, electric warfare aircraft, anti-submarine aircraft, and helicopters, to Fujian, combined with the 055-class missile destroyers and the 093-class nuclear-powered attack submarines, it will be able to form a strike group similar to the US Navy's to carry out anti-submarine, anti-ship, and ground attack missions in the vast waters outside the "second island chain." The capability is one of the most important indicators for the PLA Navy to become a blue-water force and is a necessary condition for its effective "far-sea defense." However, due to the lack of carrier operation experience in the PLA Navy, its concept of warfare, tactics, and training are not yet well developed; therefore, it is not yet a power to challenge the US Navy in the near future.

3-2. The PLA is upgrading its Navy through carrier constructions

The launch of the Fujian marks a further improvement of the PLA Navy's combat capability and shows that its

4. Ronald O'Rourke, *Electric-Drive Propulsion for U.S. Navy Ships: Background and Issues for Congress* (Washington, D.C.: Congressional Research Service, July 31 2000) , pp. CRS-19 - CRS-20.

An Analysis of PLAN Fujian Aircraft Carrier Overall Operational Capabilities

hardware construction is reaching the standard of advanced Western countries. For example, only US carriers have currently equipped EMALS similar to the Chinese one. Since the system works on the same principle as the Electromagnetic Rail Gun (ERG), its electrical energy storage and “pulse-power technology” could assist the PLA Navy in developing energy weapons. In addition, the IPS adopted by Fujian is expected to be applied to other large surface ships such as destroyers and amphibious ships in the future. Although aircraft carriers are the most important combat asset of the navies that operate them, they still have to rely on aircraft and other ships to provide protection due to their limited self-defense capability. Therefore, as the PLA Navy builds up its carrier force, in addition to strengthening the carriers’ own fighting capabilities, the escorting aircraft and ships must also perform adequately to ensure the carrier’s safety in high-intensity modern naval warfare. That means the construction of Chinese aircraft carriers is expected to boost its navy’s overall combat capability, and the effects are far more than just building new carriers. In other words, China’s aircraft carrier program can accelerate the

implementation of its goals to improve the quality of its armed forces, and the construction of its carriers will play a leading role in its military modernization.

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(The contents and views in the assessments are the personal opinions of the author, and do not represent the position of the Institute for National Defense and Security Research.)

An Observation on Continuity of Government in the Ukraine War

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1. Foreword

It has been more than four months since Russia invaded Ukraine. Most countries thought it would be a “military operation” that could end in a few days with Ukraine forced to cede territory and seek peace. However, the unexpected happened. The Ukrainian government did not collapse or go into exile but persisted against the invaders with support from the US and Europe to cause considerable damage to the Russian forces. This article examines the Ukrainian government’s efforts and adaptations after the Russian invasion from the perspective of

“continuity of government (COG).” It also draws on relevant US policies and practices as a reference for the Taiwanese government to strengthen its ability for possible major incidents.

2. Ukraine’s COG in response to the war

COG refers to the preparatory actions taken by a country to ensure that its government departments at all levels can continue essential operations in the event of major catastrophic events, such as significant natural disasters or even nuclear war impacts.¹ From the

1. On July 15, 2016, Presidential Policy Directive 40 (PPD-40) explicitly called for a plan for COG operations. It defined eight national essential functions (NEFs) that the government must maintain: Ensuring the continued functioning of the form of government under the United States Constitution, demonstrating leadership to the Nation and the world and maintain the trust and confidence of the American people, defending the US against all enemies and prevent or interdict attacks against the US or its people, property, or interests, and maintaining and fostering effective relationship with foreign nations, protecting against threats to the homeland and bringing perpetrators or attackers to justice, providing rapid, effective response to and recovery from attacks or incidents, protecting and stabilizing the economy and ensure public confidence in its financial system, and providing public health, safety, and welfare to the nation. See “Continuity Guidance Circular,” *FEMA National Continuity Programs*, February 2018, <https://reurl.cc/yr0zE2>.

Eisenhower era to the present day, COG programs have been in place for all levels of the US federal and local governments to sustain uninterrupted operations. The more nuanced “Continuity of Operations” (COOP) is a similar concept. COOP refers to the preparations made within all individual organizations, from central to local governments and from the public sectors to non-governmental organizations (NGOs) and the private sectors, to maintain basic operations in the event of disasters.

2-1 Kyiv authorities made its rapid transition to a wartime system

Russian troops invaded Ukraine on February 24, 2022, triggering an imminent threat to the COG for Kyiv. The risks include the arrest or murder of President Volodymyr Zelensky, the continuous functioning of Ukraine’s executive (headed by the President), legislature, and judiciary system, and the fall of Kyiv or even the entire country. The Ukrainian authorities must take swift steps to ensure COG and to galvanize people’s morale

to resist the invading Russian army with determination.

On February 24, Zelensky announced the severance of diplomatic relations with Russia; on the same day, the Ukrainian parliament passed a state of war throughout the country. The following day, Ukraine set up a Supreme Command in Kyiv, with President Zelensky as the Supreme Commander. Zelensky remained in Kyiv to continue his command and demonstrated his determination to resist. He was assisted by the Minister of Defence, the Chief of General Staff, and some of the Deputy Prime Ministers in making various wartime decisions.² In the face of a common threat of aggression, the Ukrainian Supreme Command is in charge of integrating the leadership of government operations. When cities fight independently, the mayor is responsible for mobilizing the citizens, and the military commanders are in charge of directing urban warfare. Several Ukrainian central ministries have moved westward to continue operations in Lviv and are administered by the Prime Minister.³ The

2. David L. Stern, “Ukraine’s Lviv Becomes ‘Western Capital’ as Some Diplomats Leave Kyiv,” *The Washington Post*, February 18, 2022, <https://reurl.cc/9GY7rv>.

3. Shen, Ming-shih, “Observing Taiwan’s War Mechanism from the Ukraine Conflict: Revelation and Exploration,” *Tamkang University Strategic Studies Annual Conference*, May 2022.

Ukrainian garrison had already completed their deployment and established fortified positions, which ensured the safety of Kyiv by keeping the Russians out of the defensive front.

2-2. “Infrastructure resilience” is the foundation of COG

Before the war, Russia launched cyberattacks on Ukrainian government agencies and banks. On the day the war broke out, it was also reported that an unidentified hacker attack disrupted Ukraine’s broadband satellite Internet connection. On February 26, Ukraine’s deputy prime minister openly asked Elon Musk for help with Internet connections. The following day, Musk responded that the Starlink satellite broadband service had been activated. Later, a total of 5,000 Starlink terminals were provided to Ukraine thanks to a partnership between USAID and Musk’s SpaceX to save the country from the threat of network

disconnection.⁴

In his speech, Zelensky pointed out that the Russian army cut off water, electricity, and all civilian daily life supplies to Ukraine after the invasion. Between February 24 to 26, Ukraine’s power grid was successfully tested for independent operation, and the government then disconnected the grid from that of Russia and Belarus. On March 16, Ukraine’s power grid effectively connected with the European grid, which signified the country’s successful power source transition from Russia to Europe.⁵ The unprecedented quick transition empowers Ukraine’s sustainable capability to resist the invasion. In addition, the Tesla Powerwall intelligent energy storage device also made a big splash in Ukraine. Each Powerwall can store up to 13.5 kWh of electricity, and up to 10 units can be interconnected into a cluster. Each cluster is sufficient to support the daily electricity needs of an average household. It can

4. Wu, Ying Fan, “Ukraine Asked Elon Musk to Relieve Internet Disconnection Concern, Musk Won 500,000 Likes,” *China Times*, February 27, 2022, <https://reurl.cc/NAmyxm>; “Ukraine’s Satellite Network Sabotaged during Russian Invasion, West Investigates,” *Central News Agency*, March 12, 2022, <https://reurl.cc/417Wd2>; “USAID Safeguards Internet Access in Ukraine through Public-Private-Partnership with SpaceX,” *USAID*, April 5, 2022, <https://reurl.cc/ErM1RR>.

5. Anna Blaustein, “How Ukraine Unplugged from Russia and Joined Europe’s Power Grid with Unprecedented Speed,” *Scientific American*, March 23, 2022, <https://reurl.cc/55y8a6>.

even last for more than three days if used only for Internet communication and the minimum level of hot water and cooking.⁶ Undisturbed Internet connectivity and household utilities provide valuable communication means and necessities to war-torn Ukraine and are also the foundation of the Ukrainian government's sustainability.

2-3. Digital warfare: a combination of information, propaganda, and psychological efforts

Defending the homeland, repelling the enemies then bringing them to justice are essential functions that must be performed for maintaining effective COG. In addition to the military and technological innovations, the Russian-Ukrainian conflict is a digital war that combines information, propaganda, and psychological efforts to determine the winner between the two sides. The Ukrainian Minister of Information has performed very well in cyber and information warfare, and Ukraine's four

information and psychological warfare centers are also very powerful.⁷ The Kyiv authority has utilized various social media, in combination with official websites and online press conferences, to successfully spread official Ukrainian government information to effectively master the right to speak about related affairs. For example, although the well-known "The Ghost of Kyiv" and "Snake Island" stories have mixed with some false information, they were very effective in terms of propaganda and boosted the soldiers' morale by depicting the bravery of the Ukrainian fighters. The functioning network also allows the Ukrainian people to reflect the real-time movements of the Russian forces through mobile phones and the Internet, creating an effective universal intelligence network and improving the combat effectiveness of the Ukrainian forces.

3. COG and Taiwan

As the war is still ongoing, many COG actions taken by the Ukrainian

6. Tang, Ming-Hui, "Tesla Power Storage Systems in Russian-Ukraine Conflict Revealed Taiwan," *Up Media*, 13 March 2022, <https://reurl.cc/o1orqg>.

7. "Centers for Information and Psychological Operations of the SSO of Ukraine. Defeat Is Near," *Top War*, March 3, 2022, <https://reurl.cc/2Z9KYv>.

authorities are not yet revealed due to their sensitive nature. For example, if Zelensky were killed, who would become his successor? What's the order of succession? Although the Ukrainian high command was established in Kyiv and Zelensky claimed he stayed on Bankova Street, Ukraine was supposed to have several underground bunkers serve as combat and preparatory command posts. From the currently publicized information and the US approach, there's much for Taiwan to learn about COG.

3-1. Strengthened leadership resilience is the core of COG

For Taipei, which lacks defensive depth, strengthening the defense of the leadership is an important national security issue. Therefore, the enhancement of leadership resilience through COG will help the government to operate continuously and lead the people to respond in the event of major disasters or shocking incidents. In this regard, there are three major points worth considering: the succession list of leaders, the shadow government, and the emergency command posts that are readily available.

The US always maintains a presidential succession list based on the 1947 Presidential Succession Act, which remains updated as circumstances dictate. In addition to the President and Vice President, there are 17 Congressional leaders and Cabinet heads on the list.⁸ Similarly, federal ministries also have their own succession lists of leaders. In case of major incidents or emergencies in the country, there would probably be no time for the agencies to discuss the succession list and the order, which may even lead to leadership crises. Therefore, the more mature and complete succession lists and system mean more robust, sustainable government agencies.

A complete "shadow government" is another important mechanism that must be evacuated into a secure command post (underground bunker) in the event of major national disruptions; it will take over the responsibility to keep the government running when necessary. After the 9/11 attacks in 2001, President George W. Bush, Jr. initiated the first "shadow government" operation in the US on that day. "Members of reserve command post" are often allocated

8. Order of Presidential Succession, *US.GOV*, <https://www.usa.gov/presidents>.

in Taiwan's military exercises and simulations. But do they regularly conduct peacetime communications and stationing exercises? In addition, the main command post, reserve posts, and other additional posts for evacuation that accommodate the political and military leaderships and the "shadow government" after major incidents, especially the equipped communication and information infrastructure, must be tested regularly, and drills for stationing and transferring the command post personnel must be conducted to ensure that the facilities can function immediately to support government operations as an essential COG measure. Only continuous testing, exercising, and validating efforts can ensure effective command post operations in wartime.

3-2. COG must be internalized into the daily routines of government agencies

There is still room for improvement in the understanding and practice of COG by Taiwan's government agencies. COG is not just about crisis management,

nor about having a preparedness or contingency plan in place and then passively waiting for inspection or rehearsal. In December 2020, US President Trump signed Executive Order 13961, "Governance and Integration of Federal Mission Resilience," which explicitly requires that all federal government departments must integrate all readiness programs into their daily operations to ensure that the US government retains essential functions under all circumstances.⁹

The Executive Order underlines the importance of the following objectives to be pursued: governments from the central to local levels must truly understand and appreciate the importance of COG, the central government must establish a COG mechanism through policy declarations and necessary legislative amendments, government ministries and agencies must complete pragmatic preparedness plans covering protection, response, adaptation, and recovery, and establishment of an agency similar to the US Federal Emergency Management Agency (FEMA) to continuously rehearse and evaluate

9. "Governance and Integration of Federal Mission Resilience," *Presidential Documents*, Executive Order 13961, December 7, 2020, <https://reurl.cc/A7WloQ>.

government departments.

Through such continuous rehearsal and validation, the US has found that if COG is internalized in all ministries, the transition from a peacetime system to a wartime one should not be a decision to be made only after the top leaders convene the heads of ministries, but must be evolved into a mechanism that works on a daily basis. As a result, a Continuity of Government Readiness Conditions (COGCON) system has been established in the US in recent years. From COGCON 4, the lowest alert level, to the first alert level in which the leadership team is fully stationed at the command post, decisions are made by the President, with the assistance of the National Continuity Coordinator (the President's Homeland Security and Counterterrorism Advisor), and FEMA and COG units are notified thereafter.¹⁰ The experience accumulated from day-to-day COG operations and the flexible peacetime/wartime system

transition mechanism will help strengthen the government's COG capability under major incidents.

3. The government's basic operational capability must be developed through continuous validations

As a lone-standing island, Taiwan might have difficulties obtaining foreign aid in the short term if blockaded. In the event of war, power plants, natural gas import facilities, and oil depots could be the targets of the first-wave attacks. Ensuring the basic supply of oil, gas, electricity, water, and food, as well as the operation of economic, financial, and public healthcare systems, is fundamental to the COG and the maintenance of citizen morale. Taiwan's "National Defense Mobilization and Preparation Act" includes eight mobilization and preparation plans for the central government agencies, while the

10. At the lowest alert level, Level 4, maintaining the backup facilities and conducting regular drills are sufficient. At Level 3 alert, government personnel must enter the reserve command post and test information and communication systems to ensure their readiness and track ministry leaders and their designated successors on a daily basis. If the alert escalates to Level 2, 50-75% of the operational staff must enter the reserve post, establish operating capabilities, and be prepared to perform the organization's essential functions following an emergency or disaster situation. Under Level 1 alert, the designated leadership team and COG Staff shall be fully stationed at the reserve post and ready to perform the organization's essential functions. See "Continuity of Government," *The White House Info*, <https://whitehouse.gov/continuity-plan/>.

authorities and operating departments of eight key types of infrastructure facilities also have protection plans in place. However, whether it's a mobilization plan or a protection plan, it must be repeatedly validated through practical exercises and evaluations to identify insufficiencies and then continue to have it refined.

In the COG mechanism of the US, the National Exercise Program (NEP) is directly under the control of the White House to implement eight different exercise programs on a two-year cycle. The NEP includes activities ranging from the Eagle Horizon exercise participated by all federal departments to exercises on how the Department of Defense supports civilian departments, in addition to operations on disaster relief, coastal logistics, cybersecurity, nuclear weapon incidents, urban nuclear facility accidents, and nuclear, biological, and chemical accidents that are repeatedly conducted and validated.¹¹ Without regular, practical peacetime rehearsal and validation, unrealistic or ignored elements of mobilization or defense

plans may continue to exist and cause significant damage to COG in case of major incidents. Continuous identification of problems and improvement of the government's basic operational capacity through implementing exercises and assessments by the related departments will be an important issue for Taiwan's COG efforts.

4. Conclusion

No one knows when a major disaster or war will hit. Still, through daily COG preparation and improvement, the government and chain of command can become more responsive and resilient to act against disasters and even enemies. At a time of climate extremes and rising military threats from China, Taiwan's government now has a relatively high probability of facing sudden, major incidents. Observing the actual situation of the war in Ukraine and the mechanism and practice of COG in the US, there is much that Taiwan should consider and put into practice.

11. "Continuity of Government," *The White House Info*, <https://whitehouse.gov1.info/continuity-plan/>.

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Taiwan Strait Crisis Once Again? Comparison of the Two Taiwan Strait Crisis

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Keywords: Taiwan Strait Crisis, missile exercise, joint amphibious landing,
joint firepower strike

Foreword

China, spurred on by Speaker of the US House of Representatives Nancy Pelosi's visit to Taiwan, planned a major live-fire military exercise within a short period. Since all six or seven exercise areas were designated around Taiwan and delineated into Taiwan's territorial waters, some media described it as the "fourth Taiwan Strait crisis." In academic terms, there is a traditional definition of "crisis," which mainly emphasizes that when a break in normal operations occurs and things get too serious to be fixed, it can certainly be categorized as a crisis. But it would be premature to define the situation as a crisis before the operation's actual actions, scope, and impact have been established, as the Chinese exercise had just begun. To avoid the overly expanded interpretation and misjudgment of China's

actions, this article will compare the 1995 and 1996 Taiwan Strait crises with the 2022 military actions to offer insights into China's intentions.

Purpose of Actions

The Chinese military exercises in 1995 and 1996 were mainly due to former President Lee Teng-hui's visit to Cornell University at the invitation of the US Congress and his speeches, which led to Jiang Zemin's agreement to hold military exercises against Taiwan at the request of hawkish Chinese general Zhang Wannian and others. In 1995, two military exercises were conducted in the northern waters of Taiwan, and in 1996, four exercises were conducted. The most notable were missile test launches targeting Taiwan's northern and southern waters. After the missile launch, China held a joint amphibious

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landing exercise involving 10,000 soldiers near Dongshan Island, Fujian. However, the exercise was terminated due to the leaked “dumb warhead” intelligence, which rendered the action ineffective. But China still sees the exercise as a major victory in the “struggle against Taiwan independence.”

Taiwan did not use any provocative language in response to China’s military actions toward the US House Speaker’s visit. However, since the visit coincided with the Chinese government’s Beidaihe meeting, China had to show a hardline attitude and strengthen its intimidation against Taiwan, given the sensitivity of the current US-China diplomatic situation. Considering the sensitive timing and the uncertainty of the outcome, China should have no intention to start a war.

Ways of Actions

The previous Chinese exercises in the Taiwan Strait Crisis focused on missile test firing, joint amphibious landings, and live fire against sea surface targets. Two exercises occurred in July and August 1995 respectively in the region north of Taiwan, and one in March 1996 for missile test firing and an amphibious landing. According to the division of

the exercise area and the information released by China, the 2022 exercise may have focused on missile firing from the PLA Rocket Force, air and sea joint strikes, long-range bomber attacks, submarine warfare, and aircraft carriers carrying out anti-intervention operations. The previous exercises had obvious intimidating connotations, but the US sent two carrier battle groups at the time while the Taiwanese forces elevated the combat readiness, reinforced the operational preparation of its outer island garrisons, and converted anti-aircraft missiles into ground-to-ground missiles. With the comprehensive military deployment, the crisis was successfully resolved.

In addition to the military exercises, the 2022 crisis was preceded by the dissemination of misinformation, cyber hacker attacks, and finally followed by joint firepower exercises. The exercise areas were designated within Taiwan’s territorial waters to encircle the island’s primary ports, international air routes, and runways of major airports to validate the feasibility of blockading Taiwan. To avoid international controversy, the exercise lasted only three days. Although it did not cause disruptions in the transportation of energy and natural gas to Taiwan,

the schedule of international flights and seaport traffic were actually affected. It cannot be ruled out that China will use this exercise as a reference for future attacks on Taiwan.

Means of Actions

The previous Taiwan Strait Crisis was led by Zhang Wannian, the Vice Chairman of CCP's Central Military Commission, who established the Nanjing Theater to plan all military operations. The PLA Second Artillery, Navy, Air Force, Army amphibious motorized infantry division, and the Marine Corps were mobilized in the exercise. According to the media coverage, although the *Xinhua News Agency* announced the scope of the exercise, the troops involved were mainly from the Eastern Theater. Due to the uncertainty of Pelosi's visit schedule, the military operation was planned in a hasty manner. Although China released videos of armored vehicle maneuvers in Zhejiang and the launching of DF-17 missiles beforehand, they were not of the actual exercise. However, the division of the exercise areas and media reports indicate that long-range rocket launchers and air-launched cruise missiles were used in air-sea joint live-fire operations,

and carrier battle groups and nuclear submarines necessary for anti-intervention operations also participated. The blockade missions require heavier vessels, such as large destroyers, but ship-intercepting operations require more naval resources.

It's also noteworthy that at the beginning of the exercise, the Cyberwarfare Department of China's Strategic Support Forces launched cyberattacks against the critical infrastructures (e.g., power) of Taiwan's government agencies and private sectors. Although the cyberattacks were relatively low-level, the future use of more targeted, high-level cyberattacks cannot be ruled out.

What to Make of this Chinese Military Exercise

1. This military operation is not a prelude to war. Although it cannot be ruled out that China might take a favorable opportunity to turn the exercise into an invasion, they need more time to mobilize and assemble troops from other theaters and services.

2. As China might have taken advantage of the exercises to form the sequence and procedures to wage war with obvious influence from the Russian

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invasion of Ukraine, they could take further military actions against Taiwan at a critical time in the future.

3. The exercise was merely China's response to the visit of senior US officials to Taiwan, which was escalated due to the sensitive timing as it came ahead of the 20th National Congress. Since Taiwan did not have any provocation actions, China's actions were obviously lacking legality and legitimacy.

4. Taiwan was able to analyze the situation in advance, grasp the situation, and deploy troops and combat capacities in a timely manner to deal with the threat. In the future, such Chinese exercises can be used as opportunities to test Taiwan's resilience and readiness for defensive operations. Since the procedures of the Chinese exercises, from cyberattacks to physical blockades, are similar to those of future military operations against Taiwan, they can be used by the Taiwanese forces and related units to improve the existing standard operating doctrines and strategies.

5. In response to China's intensified military threats, Taiwan's existing defense and reserve mobilization reform must be accelerated, and the original long-term armed forces building plan

must take emergency preparedness into consideration as well.

6. China launched a cyberattack on Taiwan's military and civilian facilities before the exercise, but fortunately, the damages were quickly restored thanks to the government's previous efforts to enhance cyber resilience. However, most websites of private enterprises, usually built by third-party companies, were vulnerable to attacks and should be included as a part of the overall national resilience initiative.

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Public Opinion on “Strengthening Our National Defense Capabilities” Facing CCP Military Exercises Around Taiwan

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Keywords: Nancy Pelosi’s visit to Taiwan, PLA military exercise, opinion polls

On August 2, 2022, United States House of Representatives Speaker Nancy Pelosi visited Taiwan, and the CCP announced plans to hold live-fire drills in six maritime areas encircling Taiwan. The PLA fired ballistic missiles across Taiwan through the atmospheric layer into Taiwan's eastern waters, organized Naval Air Forces, and crossed the Taiwan Strait median line,¹ conducting joint air and sea operations.² This article aims to explore how the CCP drills affect Taiwan’s national morale through the use of opinion polls.

This telephone opinion survey is conducted by the Election Study Center, NCCU, on behalf of INDSR; the survey subjects are adults over 20 years old in Taiwan, excluding the outlying islands of Kinmen and Matsu. The survey was carried out between August 3-7, covering Pelosi’s visit and the CCP drills. During the survey, 753 landline samples and 322 mobile phone samples were completed (1,075 samples in total). The samples were rank-weighted according to gender, age, education, and place of residence. They were not significantly different from

1. For related reports, see Lu Jiahong, “Pelosi’s Visit to Taiwan: China’s Strategy of Military Exercises around Taiwan with Ballistic Missiles ‘Flying across Taiwan’ and Public Reaction, *BBC Chinese*, August 5, 2022, <https://reurl.cc/D3dOL6>; “Ministry of National Defense Issues Press Release on ‘whether Ballistic Missiles Launched by the Chinese Communist Party Targeting Our Eastern Waters Flew over Taipei’,” *Ministry of National Defense of the Republic of China*, August 4, 2022, <https://pse.is/4c2463>.

2. “August 7 Press Release on Airspace Dynamics around Taiwan Strait,” *Ministry of National Defense of the Republic of China*, August 7, 2022, <https://pse.is/4dxjkv>.

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the statistical population and sufficiently representative of the public, with a maximum possible random sampling error of $\pm 2.99\%$ estimated at a 95% confidence level.

Pelosi’s visit to Taiwan has enhanced the people’s trust in the U.S. security promise

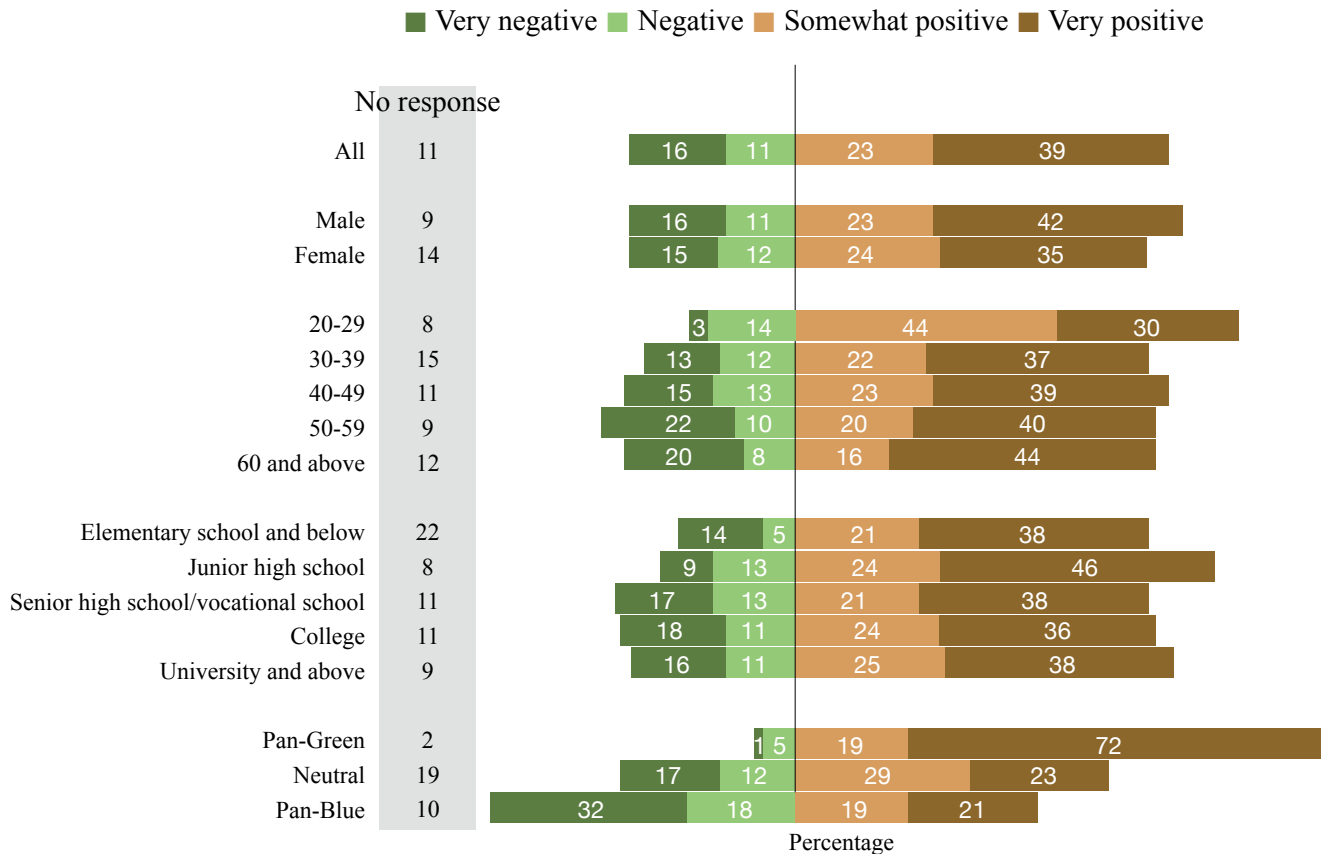
This opinion poll shows more than 60% of the Taiwanese people support Pelosi’s visit (Figure 1). In a cross analysis with the basic demographic variables of the respondents, we found that a majority

of the respondents supported Pelosi’s visit to Taiwan regardless of their gender, age, and education level (including categories for “very” and “somewhat” supportive). There is a clear difference in attitude towards Pelosi’s visit to Taiwan between those who identify with different political parties. Ninety-one percent of the pan-Green identifiers support Pelosi’s visit to Taiwan, while 52% of the neutral respondents support Pelosi’s visit to Taiwan, and only about 40% of the pan-Blue identifiers support Pelosi’s visit to Taiwan.

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Figure 1: Taiwanese people’s attitude towards Pelosi’s visit

How do you feel about U.S. House of Representatives Speaker Nancy Pelosi’s visit to Taiwan?



Note: (1) How do you feel about U.S. House of Representatives Speaker Nancy Pelosi’s visit to Taiwan?
(2) No response includes “No comment”, “don’t know”, and “Refuse to answer”.

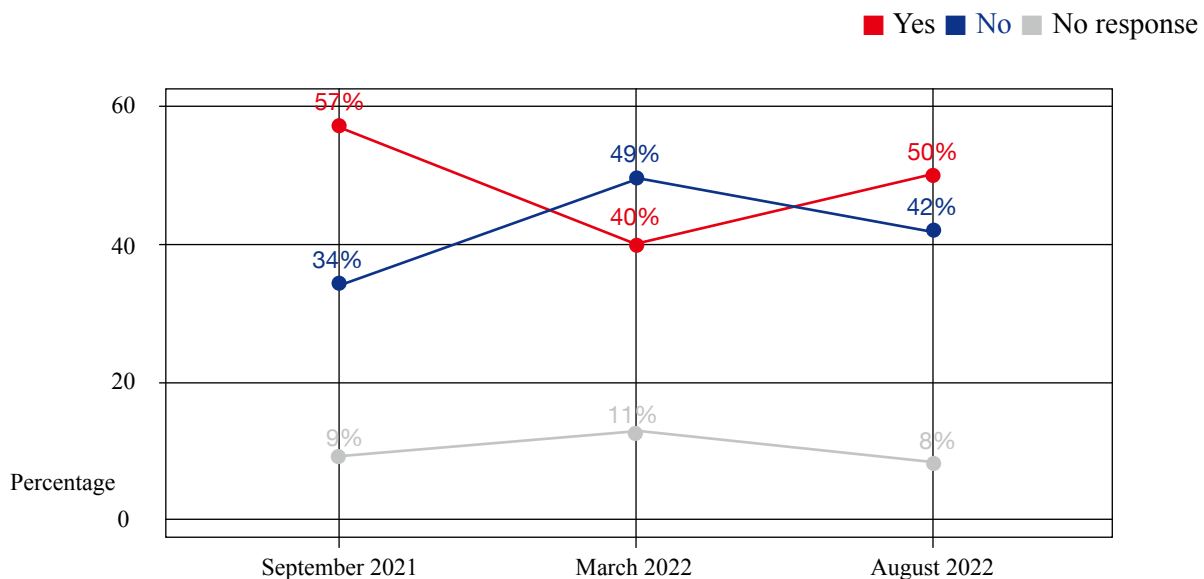
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In fact, Taiwan and U.S. officials and lawmakers have been visiting each other for a long time. It not only improves the substantial relationship between Taiwan and the U.S.; for most people, it also signifies the U.S. security promise to Taiwan, which is a great morale booster. Our opinion poll question is, “If a war were to break out between Taiwan and China, do you think the U.S. will back Taiwan?” We use this question to see how much trust Taiwanese people have in the U.S. security promise to Taiwan.

Figure 2 shows, that in September 2021, 57% of the Taiwanese people believed if a war were to break out between Taiwan and China, the U.S. would back Taiwan. But in March this year (2022), due to the impact of the Russia-Ukraine war, the percentage dropped to 40%. After Pelosi’s visit, the percentage bounced back to 50%. From here, we can see the visit of U.S. senior officials to Taiwan has helped enhance Taiwanese people’s trust in the U.S. promise to defend Taiwan.

Figure 2: The trend of Taiwanese people’s attitude towards U.S. promise to defend Taiwan

If a war were to break out between Taiwan and China, do you think the US will back Taiwan?



Note: (1) Yes includes “Definitely” and “probably”; No includes “Probably not” and “Definitely not”.
 (2) No response includes “No comment”, “don’t know”, and “refuse to answer”.

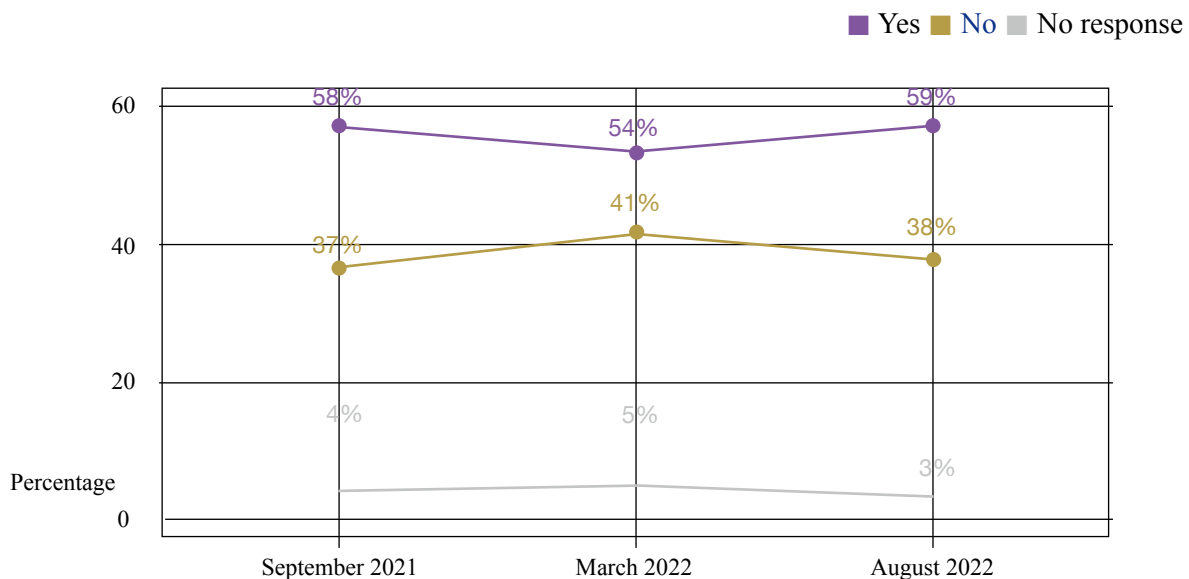
60% of the Taiwanese population have confidence in Taiwan’s military strength

In response to the CCP exercise, Taiwan’s military deployed various equipment to monitor enemies and sent air and sea forces to stop the CCP military aircraft and ships from approaching Taiwan’s air and seas. People saw the composure and courage demonstrated by the Ministry of National Defense, R.O.C.

This is reflected in the opinion poll (Figure 3). We discovered nearly 60% (59%) of the Taiwanese people have confidence in Taiwan’s military strength, the highest since September 2021. In other words, the PLA exercise didn’t demoralize the Taiwanese people. Instead, seeing Taiwan’s military’s appropriate response and demonstration of military strength, people have gained more confidence in the military.

Figure 3: The trend of Taiwanese people’s confidence in Taiwan’s national defense

Are you confident in Taiwan’s national defense?



Note: (1) Yes includes “very confident” and “quite confident”; No includes “slightly confident” and “zero confidence”.
(2) No response includes “No comment”, “don’t know”, and “refuse to answer”.

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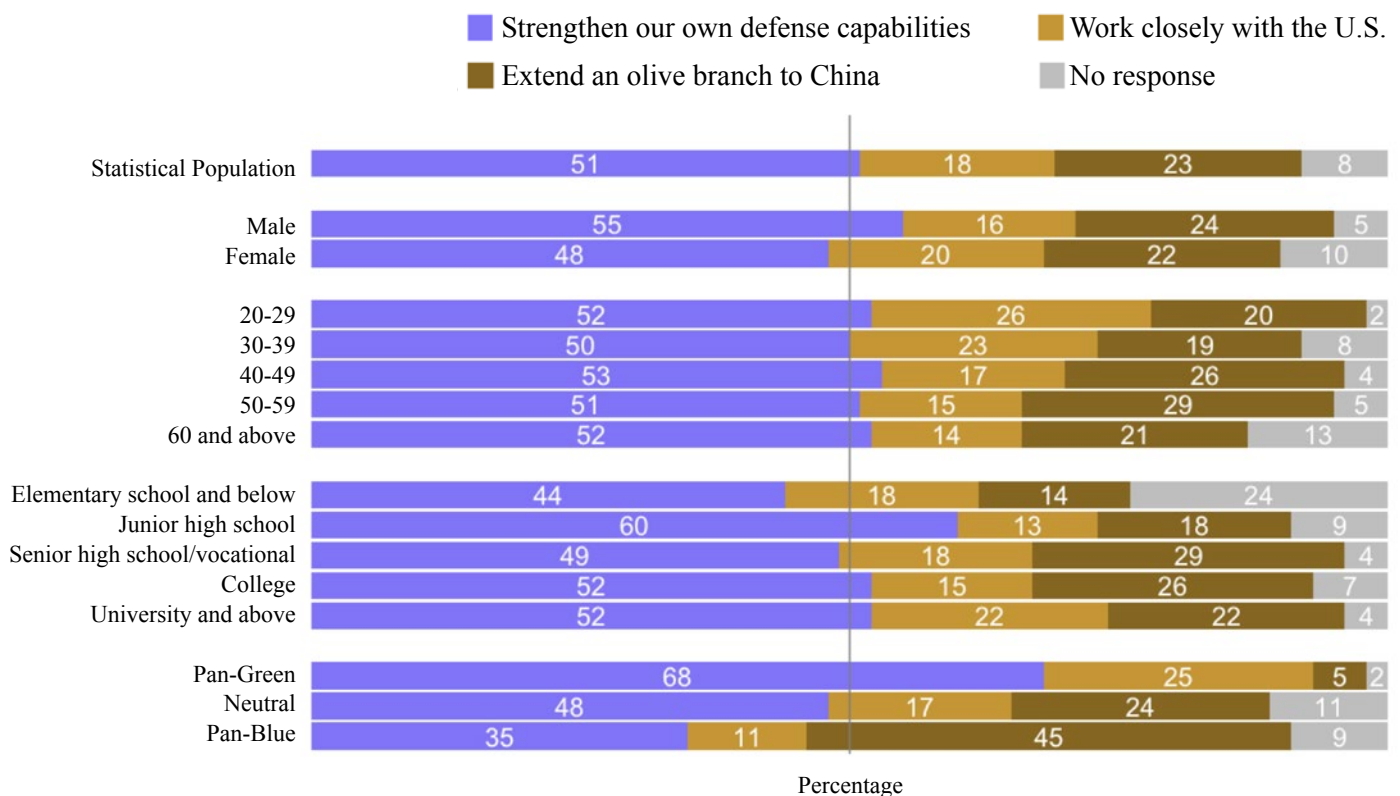
People believe strengthening Taiwan’s defense capabilities is a top priority

Faced with the grand CCP military exercise, the poll asks, “What do you think is the most important measure for our government to take to maintain national security and regional peace?” The result shows out of all respondents (Figure 4), 51% state the most important measure to maintain national security is to strengthen our own defense capabilities; 18% believe it's to work closely with the U.S., and 23% think it's to extend an olive branch to China. Further cross analysis shows that the idea of prioritizing “strengthening

our own defense capabilities” is shared by a majority of people of all gender, age, and educational level, with only a clear divide between Blue and Green supporters, in terms of the ways to maintain Taiwan’s national security. If we set aside political disputes, “strengthening our own defense capabilities” is not only a priority for the majority of the people but also the biggest common ground for safeguarding our national security. In the face of the looming threat from China, it is imperative to strengthen our defense capabilities, raise awareness and build consensus among all people.

Figure 4: The most important measure to take to maintain national security and regional peace

What do you think is the most important measure for our government to take to maintain national security and regional peace?



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