

Chapter 6

The United States

**The Trump Administration's Second Year:
Aiming to Restore a "Strong America"**

Sugio Takahashi

The Donald Trump administration came into office amid the decline in the overwhelming state power of the United States, which had enjoyed “sole superpower” status for some time since the end of the Cold War, and as its relations with the great powers of China and Russia began to turn competitive. Based on a worldview that “great power competition returned,” the National Security Strategy (NSS) was unveiled on December 18, 2017. On the basis of such a worldview, the Trump administration is delivering a competitive policy toward China, as seen, for example, from the “US-China trade war” and issues over technological competitiveness. As regards North Korea, a US-North Korea Summit was held for the first time in history in June, followed by US-North Korea consultations. It remains unclear whether they will ultimately lead to the denuclearization of the Korean Peninsula.

In the defense arena, the United States is engaged in rebuilding its nuclear arsenal and research and development of new technologies. In addition to the existing nuclear warhead Life Extension Program (LEP), the United States is developing and undertaking persistent efforts to modernize nuclear arsenals, including new intercontinental ballistic missiles (ICBMs), new bombers, and new strategic missile nuclear-powered submarines. With regard to new technologies, although outer space, hypersonic technology, directed energy weapon, and artificial intelligence have garnered attention, most of them are still in the research phase and their application is expected to take time.

As for domestic politics, mid-term elections were held on November 6. The Democratic party secured a majority in the House of Representatives, whereas the Republican party gained seats in the Senate. There was no change in the overall trend from the 2016 presidential election, namely, strong Democrat support in urban areas and strong Republican support in the suburbs. Still, the Democratic party has increased its influence on the budget and legislation by capturing a majority in the House of Representatives. Going forward, the Democrats will begin to shortlist candidates for the 2020 presidential election.

1. Security Strategy Based on a Worldview that "Great Power Competition Returned"

(1) Establishment of New Security Strategy: Return of Great Power Competition

The US security strategy during the Cold War was known as "containment strategy." It aimed to physically contain communist expansion, and ultimately led to the collapse of the Soviet Union and the United States' victory in the Cold War. After the war, the United States explored a new security strategy. The George H.W. Bush administration in power at the end of the Cold War proposed the "new world order." This concept sought to maintain world stability by having the United States play a lead role in utilizing the United Nations after the 1991 Gulf War. The Bill Clinton administration that followed proposed "engagement and enlargement" in the 1995 NSS and other documents. This concept presented a direction for creating a stable security environment through promoting democratization, mainly in Eastern Europe. Under the George W. Bush administration, the 2002 NSS set forth "preemptive action" against terrorism using weapons of mass destruction, and expressed a continued strong commitment to enlarging democracy. As these strategy concepts demonstrate, the US security strategies from the end of the Cold War to the Bush administration share a common vision of making proactive use of the overwhelming state power of the United States as a "sole superpower" that won the Cold War, based on a strategy goal of enlarging democracy, and of making this goal a reality.

As to great power relations, the US policy on China prioritized "engagement" during the Clinton administration and then adopted a "shape and hedge" approach during the Bush administration. This strategy was designed to "shape" China to fulfill its role as a responsible major power, while strengthening deterrence to "hedge" against the possibility of China becoming a military concern. Towards Russia, the United States implemented a strategy of enlarging the North Atlantic Treaty Organization (NATO) to the former Eastern European countries, while engaging Russia to a certain extent including incorporating it into the G8.

Following the September 11 attacks, however, the United States attempted but failed at nation building aimed at democratization in Afghanistan and Iraq. Conversely, this led to a quagmire of conflicts. Furthermore, the US confidence

as a “sole superpower” began to decline, coupled with the global economic crisis in 2008. Against this backdrop, the Barack Obama administration came into power. The Obama administration undertook major strategic changes. The Obama administration exercised considerable self-restraint and selectivity in responding to the issues which emerged, such as Libya, Syria, and the Islamic State of Iraq and the Levant (ISIL), without engaging in large-scale interventions as was seen during the Clinton and Bush administrations.

Great power relations also underwent a significant transition during the Obama administration. US expectations for China fulfilling a role as a “responsible major power” dissipated with China’s response to global warming, assertive behaviors in the South and East China Seas, and rapid development of anti-access/area denial (A2/AD) capabilities, such as anti-satellite (ASAT) weapons, stealth fighters, and anti-ship ballistic missiles (ASBM), while it continued to maintain a defense policy that lacked transparency. In addition, US-Russia confrontations intensified abruptly since Russia’s annexation of Crimea in 2014, and this marked a significant turning point in great power relations.

The Trump administration came into office as such major strategic level issues became acute. Namely, the post-Cold War security strategy underpinned by the state power of a “sole superpower” had reached its limits, and great power relations with China and Russia underwent a transformation. Moreover, ever since the primaries of the 2016 presidential election, Trump adopted a different position from mainstream US politicians known as “establishment.” As a result, attention was paid to what kind of a security strategy the Trump administration would set forth.

The answer came to light through the NSS unveiled on December 18, 2017. Its greatest characteristic is that, based on a worldview that “great power competition returned,” the NSS contends that the United States must regain “strength” and secure peace through this “strength.”

First, the NSS strongly criticizes the US security policy after the end of the Cold War. It condemns the “engagement and enlargement” strategy of the Clinton administration, stating, “We assumed that our military superiority was guaranteed and that a democratic peace was inevitable. We believed that liberal-democratic enlargement and inclusion would fundamentally alter the nature of international relations and that competition would give way to peaceful cooperation.” The NSS then condemns the “transformation” carried out by

Secretary of Defense Donald Rumsfeld during the Bush administration, stating, "We also incorrectly believed that technology could compensate for our reduced capacity...We convinced ourselves that all wars would be fought and won quickly, from stand-off distances and with minimal casualties." Regarding the defense budget cuts during the Obama administration, the NSS notes, "The breakdown of the Nation's annual Federal budgeting process, exemplified by sequestration and repeated continuing resolutions, further contributed to the erosion of America's military dominance during a time of increasing threats."

On this basis, the NSS presents the worldviews that "great power competition returned" and "China and Russia began to reassert their influence regionally and globally." It notes that there are three sets of challengers to the United States: the revisionist powers of China and Russia, the rogue states of Iran and North Korea, and transnational threat Islamic extremist organizations.

Based on this worldview that "great power competition returned," the United States went on to release the National Defense Strategy (NDS) in January 2018 that elucidated its overall defense strategy, and in February, released the Nuclear Posture Review (NPR), a strategy document regarding its nuclear strategy. As this sequence shows, the Trump administration formulated security strategies in succession, moving from general to specific. While this may seem obvious at first glance, it is not necessarily the case. For example, the Quadrennial Defense Review (QDR) that explained the Bush administration's defense strategy for the first time was released on September 30, 2001, shortly after the September 11 attacks, while the first NSS that presented the preemptive action theory was a year later in September 2002. During the Obama administration, the first NSS was released in May 2010, following the releases of the Ballistic Missile Defense Review (BMDR) and the QDR in February 2010 and the NPR in April 2010.

In contrast, in the Trump administration, the NSS, which is positioned at the highest level of strategy documents, was established ahead of other strategy documents. It is worth noting that this NSS outlined guidelines for succeeding strategy documents, such as the NDS and NPR. Unlike past administrations, the Trump administration established strategies in an orderly manner.

(2) US-China Relations Increasingly Underpinned by Competition

As discussed above, the security strategy of the Trump administration is based on a worldview that “great power competition returned.” The key player in this great power competition in Asia will likely be China. The 2017 NSS expresses strong wariness towards China, noting that, “China seeks to displace the United States in the Indo-Pacific region.” Furthermore, based on the policy concept of a “free and open Indo-Pacific” outlined in an address President Trump delivered at the Asia-Pacific Economic Cooperation (APEC) CEO Summit (Da Nang, Vietnam) on November 10, 2017, the NSS provides a view of the regional situation that, “A geopolitical competition between free and repressive visions of world order is taking place in the Indo-Pacific region.” The NSS makes a firm statement that, “Although the United States seeks to continue to cooperate with China, China is using economic inducements and penalties, influence operations, and implied military threats to persuade other states to heed its political and security agenda.” In addition, in a speech delivered at the Hudson Institute on October 4, 2018, Vice President Mike Pence condemned China’s economic and human rights policies as well as intellectual property theft, and expressed the administration’s commitment to resolutely protecting US interests, employment, and security.¹ Contrary to past administrations, the Trump administration indicated an intention to implement a China policy that gives clear priority to competition with China.

Thus far, the incumbent administration’s competitive China policy stands out on the economic front. Since the days of his presidential campaign, Trump vowed to adopt a policy that gives high priority to correcting trade imbalances. After his administration was inaugurated, President Trump reportedly did not change his view, even after Gary Cohn, who was appointed National Economic Council Director, explained that 80% of the current US economy was the tertiary industry and that giving US citizens access to inexpensive items was advantageous, even if they were imported.² In 2018, economic confrontation escalated between the United States and China. US-China ministerial-level trade consultations were held twice in May and once in June. They discussed but did not reach an agreement regarding matters such as rebalancing US-China economic relations, intellectual property rights, and unfair forced technology transfer. On July 6, the United States first imposed tariffs on 818 Chinese items worth \$34 billion. Furthermore, on August 23, the United States imposed a second round of tariffs, raising the tariff rate on mainly Chinese semiconductors and chemical

pharmaceuticals, and on September 24, decided to impose a third round of tariffs, levying an additional 10% tariff on 5,745 items. China responded by taking retaliatory measures that increased respective tariff rates, causing the situation to develop into a "US-China trade war." However, at the US-China Summit (which the United States refers to as "Working Dinner") held on December 1 on the margins of the G20 Summit in Buenos Aires, Argentina, President Trump and President Xi Jinping of China reached an agreement as follows. The leaders agreed to hold consultations within the next 90 days towards structural changes in the areas of technology transfer, intellectual property rights, non-tariff barriers, cyber attacks, services, and agriculture, and that tariffs would not be raised in the meantime.³ Following this, US-China consultations were held based on a March 1, 2019 deadline.

The "US-China trade war" situation has drawn focus to disputes over trade imbalances. The US-China consultations, however, places particular focus not only on trade but also issues related to competitiveness in the technology sector. The 2017 NSS refers to this issue under the concept of "National Security Innovation Base" (pp. 21-22). This is the notion that, against the current international backdrop which has made it important to promote technological innovations for national security, China has gained unfair superiority in innovation by "stealing" technologies and early-stage ideas, and the US innovation base must thus be protected from competitors like China. The NSS mentions the need to strengthen intellectual property protection, restrict direct investment, and implement stricter controls on accepting international students.

The Office of Trade and Manufacturing Policy, formed by reorganizing the National Trade Council that was established shortly after the inauguration of the Trump administration, released a report in June entitled, "How China's Economic Aggression Threatens the Technologies and Intellectual Property of the United States and the World."⁴ This report severely criticizes China for unfairly

acquiring the technologies of the United States and other developed countries through intellectual property theft, evasion of US export controls by utilizing Chinese Americans and other channels, reverse engineering, forced intellectual property transfer when establishing foreign joint ventures, theft of advanced technologies by way of excessive product testing, forced localization of research and development facilities, and foreign direct investment. It is thought that such intellectual property issues were critical items on the agenda of the US-China ministerial-level trade consultations. However, no significant progress has been made, and this is believed to have significantly factored into the imposition of the series of tariff measures.

Importance is given to the Committee on Foreign Investment in the United States (CFIUS) to deal with Chinese direct investment in US high-tech companies. CFIUS is a body established during the Gerald Ford administration in 1975 in the Cold War era to review investments of foreign governments and companies from the perspective of national security threat. A well-known example of reviews conducted by CFIUS is the Fujitsu-Fairchild case of 1988. Amid the rising Japan-US trade friction, CFIUS did not permit Japan's Fujitsu to acquire Fairchild, a producer of military semiconductors, including control parts for ICBMs.

As a legal measure to strengthen CFIUS, the Foreign Investment Risk Review Modernization Act was submitted to Congress on November 8, 2017 as a bipartisan bill of the Republican and Democratic parties. This bill was passed on August 13, 2018 as part of the FY2019 National Defense Authorization Act (FY2019NDAA).⁵ Pursuant to this new law, CFIUS is empowered to newly review the purchase or lease of real estate that is in close proximity to a US military installation or other properties as well as access to technologies through joint ventures.

In the context of these developments, it cannot be overlooked that the US-China competition is not only due to President Trump's strong intention to correct trade imbalances. In 2018, the United States passed the Taiwan Travel Act that encourages visits to Taiwan by US government officials at all levels and bans the US government from restricting visits to Taiwan. The United States also passed FY2019NDAA,⁶ which included strengthening CFIUS, prohibiting US government agencies from using the services and devices of Chinese major telecommunications providers ZTE and Huawei, prohibiting China from participating in the Rim of the Pacific Exercise (RIMPAC), and supporting

Taiwan's defense capability improvements. These measures were all led by Congress. This suggests that the US-China trade war is not an isolated trade policy of the Trump administration, but is being unfolded as part of the realignment of the United States' China policy amidst the "great power competition."

It is considered that this is being driven by structural changes in the US policy towards China. Between the end of the Cold War and midway into the Obama administration, the US policy on China was to encourage China to fulfill its role in the international community as a responsible major power, while developing US deterrence to safeguard against the possibility that it does not. The framework that clearly laid this out was the "shape and hedge" strategy, which was outlined by the Bush administration and essentially upheld in the first half of the Obama administration. Such a China policy maintained balance between the business community, which had high future expectations for the Chinese market and sought enlargement of economic engagement with China, and security and national defense experts who could not dismiss their sense of wariness towards the rise of China. In particular, around the time that China joined the World Trade Organization (WTO), it was expected that the Chinese economy would reform itself and open to other countries, generating many business opportunities.⁷ Despite such expectations, market access and the investment environment did not improve no matter how much time had passed. On the contrary, technology and intellectual property theft were conducted continuously through various means. Furthermore, China set out concepts like "Made in China 2025" that seemed to challenge the US economy from head on, instilling the importance of competing to seize the initiative in developing next generation communications technologies focused on 5G. Such circumstances are thought to have led even the business community to shift policy preferences towards maintaining and strengthening technological superiority and economic competitiveness. As a result, the US policy on China underwent structural changes and took on a strong competitive character. Accordingly, it is highly likely that this competitive China policy would be basically continued into the future, not only by the Trump administration.

(3) Denuclearization of the Korean Peninsula Through Dialogue

North Korea's development of nuclear weapons and missiles has been a critical international security issue since the 1990s. During this time, diplomatic

efforts were attempted, including the Agreed Framework of 1994 and the denuclearization agreement of the Six-Party Talks of 2005, but they did not materialize into the denuclearization of North Korea. Against this background, North Korea conducted frequent nuclear tests and repeated missile launches since 2016. In response, the Trump administration that was inaugurated

in January 2017 enhanced pressure on North Korea in various ways, including strengthening military pressure and economic sanctions.

Under such circumstances, changes in the North Korean posture began to be observed from early 2018. First, the PyeongChang Olympic Games triggered increased contacts between North and South Korea. This was followed by the inter-Korean summit on April 27 and the first US-North Korea Summit in history held at the Capella Hotel in Singapore on June 12.

A Joint Statement was issued on the occasion of the US-North Korea Summit. Specifically, the US and North Korean leaders agreed that: (1) the United States and the DPRK commit to establish new US-DPRK relations, (2) the United States and the DPRK will join their efforts to build a lasting and stable peace regime on the Korean Peninsula, (3) reaffirming the Panmunjom Declaration issued at the inter-Korean summit on April 27, 2018, the DPRK commits to work toward complete denuclearization of the Korean Peninsula, and (4) the United States and the DPRK commit to recovering POW/MIA remains from the Korean War, including repatriation. On this basis, US-North Korea consultations towards denuclearization have been held. The Trump administration pursues the “Libya model,” which involves North Korea first relocating its nuclear weapons and dismantling nuclear facilities and then receiving economic supports and regime guarantees. No significant progress in denuclearization has been observed as of the end of December 2018.

It remains to be seen how the US-North Korea consultations will evolve. At the current point in time, “agreement” between the two sides is limited to references made to denuclearization and to an outline of regime guarantees in the

Panmunjom Declaration and the US-North Korea Joint Statement. No detailed agreement has been reached on any concrete roadmap that would form the basis of future denuclearization and regime guarantees. Metaphorically speaking, the situation is similar to that of summer 2003, i.e., the beginning of the Six-Party Talks. These Six-Party Talks agreed on a detailed roadmap for denuclearization in September 2005, two years after the Talks began. It will thus not be surprising if it takes around two years for the ongoing consultations to arrive at a detailed roadmap for denuclearization.

The problem is that North Korea could use the time required for consultations to arrive at a detailed roadmap for gaining time to rebuild its economic situation, while continuing to develop nuclear weapons and missiles. In view of what has transpired so far, it should not be assumed unconditionally that North Korea intends to seriously engage in denuclearization. In this regard, a litmus paper-type condition needs to be set as a clear indicator for North Korea's intention. Such a condition may be the irreversible implementation of the denuclearization process.

North Korea, setting out a dialogue policy at the beginning of 2018, has issued a moratorium on nuclear testing and missile launches, demolished a nuclear testing site, and has also indicated that its nuclear facility in Yongbyon could be dismantled. These measures do not, however, actually lead to increased transparency or reduction in the nuclear assets potentially held by North Korea. In this sense, these are reversible measures and are insufficient for identifying the true intentions of North Korea.

For example, in the case of Yongbyon, submitting records of nuclear reactor operations is more important than merely dismantling the nuclear facility for calculating the total plutonium production. Other conceivable measures include submitting nuclear test data to more accurately estimate the yield of nuclear warheads, as well as conducting onsite inspections and gathering soil samples at the former Punggye-ri nuclear testing site necessary for inferring the general design of nuclear warheads. Although these measures do not directly result in reducing North Korea's nuclear assets, they will provide access to concrete data on the state of progress of North Korea's nuclear development, which had not been sufficiently available before. Data will never be lost once it is provided, and in this regard, it will serve as an indicator for gauging the true intentions of North Korea. It can be considered that North Korea has a serious intention

to denuclearize only when such measures have been taken. One possible option worth noting is to carry out diplomatic negotiations by first narrowing down the items to this point.

In any event, it cannot be dismissed that North Korea may be aiming to buy time. While now is the time for maximum diplomatic efforts, as long as it cannot be ruled out that North Korea's strategic goal is to buy time, the United States must make effective use of this time by strengthening its capabilities and further enhancing deterrence through deepening cooperation with Japan and South Korea.

2. Efforts Towards Modernizing US Forces

(1) Rebuilding the Nuclear Arsenal

On February 2, 2018, the US Department of Defense (DoD) released the NPR for the first time in eight years. The NPR is a document outlining the US nuclear strategy and force structure. This was the fourth NPR, following on from 1994, 2002, and 2010. Although the 1994 and 2002 editions kept the content confidential and made only some sections public, the full report has been released publicly since the 2010 edition. The NPR fulfills a key role in shedding light on the US declaratory policy on nuclear strategy.

Like the 2017 NSS, the 2018 NPR presents a US nuclear strategy which is based on a worldview that “great power competition returned.”

The 2018 NPR gives particular emphasis to modernizing the US nuclear arsenal. The current US nuclear arsenal consists of dual-capable tactical aircraft and the “nuclear triad”: ICBM, submarine launched ballistic missile (SLBM), and strategic bomber. The US strategic nuclear arsenal in particular has components installed and maintained since the Cold War, raising concerns of increasing obsolescence compared to Russia, which has continued to modernize its nuclear arsenal since the



B-2 aircraft comprising the US strategic nuclear arsenal (July 29, 2016, photo taken by the author at the US Offutt Air Force Base)

Cold War, and China, which has promoted rapid modernization of its nuclear arsenal in recent years. For example, the Minuteman III ICBM was first deployed in 1970, and its production ceased in 1978.⁸ The W78 warhead used on Minuteman III was developed in 1978. Furthermore, the Trident D5 SLBM was deployed in 1990. Its W76 warhead was developed in 1976, while W88 was developed in 1988.⁹ As for the strategic bomber B-52H, it was developed in 1962.

For this reason, modernizing the nuclear arsenal has been high on the agenda since the 2010 NPR of the Obama administration. Already at this stage, there were plans to build follow-on strategic submarine ballistic nuclear (SSBN) submarines to the Ohio-class SSBNs, develop dual-capable F-35s, consider a follow-on system to the Minuteman III ICBM, consider follow-on strategic bombers, and implement LEPs for warhead modernization. During the second term of the Obama administration, decisions were made to build a new Columbia-class SSBN, develop a ground-based strategic deterrent (GBSD) as a follow-on ICBM, and develop the B-21 strategic bomber, and LEP was also implemented.

The 2018 NPR affirms that the above would be carried out, along with proposing the Long-Range Stand-Off (LRSO) program and the use of low-yield warheads on some Trident D5. Furthermore, the NPR notes that, depending on the responses taken by Russia, which is in violation of the Intermediate-Range Nuclear Forces (INF) Treaty, the United States would develop nuclear-armed, sea-launched cruise missiles (SLCMs) as a follow-on system to the nuclear Tomahawk, whose removal was decided in the 2010 NPR.

The implementation of these programs is supported by the budget. Research and development (R&D) and management of US nuclear warheads are under the jurisdiction of the National Nuclear Security Administration (NNSA) of the Department of Energy (DoE). Accordingly, budgets related to the modernization of nuclear warheads, including LEP, come from the DoE budget. For the purposes of congressional budget deliberations, however, the DoE's nuclear weapons-related budget is incorporated into the national defense expenditure, along with the national defense-related budget of the DoD. In the FY2019 budget proposal, approximately \$1,101.7 million was appropriated for the NNSA nuclear weapons budget. It covers the W88 (approximately \$304.29 million) and W76 (approximately \$113.89 million) warheads on Trident D5, the W80 (approximately \$654.77 million) warhead on LRSO, LEP for the B61-12 (approximately \$794.05 million) carried on an aircraft,

and a feasibility study for the IW1 warhead on GBSD next-generation ICBM (approximately \$53.00 million).

DoD will conduct R&D of delivery systems. The budget appropriates approximately \$345 million for GBSD, \$515 million for Columbia-class SSBN, approximately \$2,315 million for the B-21 bomber, approximately \$615 million for LRSO, and approximately \$77 million for the nuclear-capable F-35. As such, the United States seeks to steadily modernize its nuclear arsenal in response to China and Russia's nuclear modernization. However, R&D on a new nuclear SLCM has not yet begun. It is presumed that the United States will continue to consider developing a new nuclear-capable SLCM while paying attention to Russia's responses.

(2) Prospects of the Ballistic Missile Defense System

During the Cold War, it was considered that a ballistic missile defense (BMD) system could undermine the stability of the mutual deterrence of the United States and the Soviet Union. The Anti-Ballistic Missile (ABM) Treaty concluded in 1972 strictly limited not only deployment but also activities including R&D. BMD came to be regarded as important after the end of the Cold War, based on projections that ballistic missiles utilized in regional conflicts such as the Scud missiles used by Iraq in the Gulf War would become serious threats, coupled with the proliferation of weapons of mass destruction. Under the Clinton administration, it was decided that a two-pronged missile defense system would be developed consisting of: Theater Missile Defense (TMD) against short- and intermediate-range ballistic missiles, and National Missile Defense (NMD), which studies BMD systems for defending the US mainland.

In short, R&D of BMD at the theater level which complied with the ABM Treaty was carried out in the name of TMD, while R&D of BMD at the strategic level which might conflict with the ABM Treaty was carried out in the name of NMD. As of this time, more concrete plans were developed for TMD. TMD as a whole was divided into ground-based system, sea-based system, upper-tier system, and lower-tier system. On this basis, the United States developed the Terminal High Altitude Area Defense (THAAD) as a land-based upper-tier system, the Patriot surface-to-air guided missile PAC-3 as a low-tier system, the NTWD as a sea-based upper-tier system, and the Navy Area Defense (NAD) as a low-tier system. As for systems that do not fall under these categories, the United

States conducted R&D of the Air Force's Airborne Laser (ABL) and Boost-phase Kinetic Interceptor (BKI).

The Bush administration that was inaugurated in 2001 revoked the ABM Treaty and initiated a full-scale missile system program for defending the US mainland, transforming what was previously known as NMD into the Ground-based Midcourse Defense (GMD) system. As for systems known as TMD, the administration terminated NAD, ABL, and BKI from the perspective of cost and feasibility. It renamed NTWD into Aegis BMD, and carried out R&D of THAAD, PAC-3, and Aegis BMD. This general framework was maintained into the Obama administration. Today, the United States deploys BMD centered around GMD, Aegis BMD, THAAD, and PAC-3.

As the above exemplifies, the BMD system conceptualized approximately 15 years ago, when concrete steps for a defense system began to be taken, will be completed to a certain degree, and the United States continues to take measures to strengthen these systems. In this connection, Lieutenant General Samuel Greaves, Director of the Missile Defense Agency (MDA), in his testimony to Congress on April 17, 2018, stated that MDA will expand the current 44 deployed Ground-Based Interceptors (GBIs) to 64 GBIs by 2023, enhance the discrimination capabilities of missiles including new deployment of radars, improve kinetic interceptors, and develop Multi-Object Kill Vehicles (MOKVs).¹⁰

Meanwhile, at a US think tank, there is discussion emerging that the United States should, as a follow-on to the first-stage BMD system, pursue the development of a second-stage defense system which continues to utilize space-based and directed energy weapons.¹¹ Michael Griffin, Under Secretary of Defense for Research and Engineering, in his testimony to the House Armed Services Committee on April 17, also stated that space-based directed energy weapons should be deployed by the second half of the 2020s.¹²

As far as the programs for which budget requests have been made as of 2018 are concerned, for space, there are plans to develop a Space Tracking and Surveillance System (STSS) and a Space-Based Infrared System (SBIRS) that detect and track ballistic missiles, in addition to the new Spacebased Kill Assessment (SKA) for swiftly gauging interception results. Space is utilized no more than as a domain for deploying sensors, and no R&D is conducted for deploying intercept systems to space. As regards directed energy weapons, Lieutenant General Greaves, in his congressional testimony, referred to a program that will mount directed

energy weapons onto High-Altitude Long Endurance (HALE) unmanned aerial vehicles (UAVs) and conduct boost-phase interception from a long distance in the future. Currently, however, the United States is in a phase of conducting tests by mounting target-tracking lasers onto a Medium-Altitude Long Endurance (MALE) UAV, the MQ-9 Reaper, which is not a HALE UAV, and developing 30 kW-class free electron lasers of a size that can be mounted onto UAVs.

It suggests that, while developing directed energy weapons and deploying interceptor systems to space have garnered increasing interest, it has not led to actual R&D of such systems. It is assessed that the United States will continue to improve the existing kinetic interceptor based BMD for some time to come, while comprehensively developing an air defense system against ballistic missiles, cruise missiles, and aircraft in the form of an integrated air and missile defense (IAMD) system.

(3) State of Research and Development in Emerging Technology

In the final years of the Obama administration, then Secretary of Defense Chuck Hagel unveiled the “Third Offset Strategy.” Since then, there has been increasing interest in emerging technologies to counter the A2/AD capabilities being strengthened by China and Russia.

Table 6.1 displays programs that are in the top 25 for R&D spending in the FY2019 defense budget proposal. As far as this table is concerned, most programs with a large budget are those for the modernization of nuclear arsenals or existing platforms, such as fighters, and programs that have been underway like BMD. New technologies that have drawn attention in connection with the “Third Offset Strategy,” such as space-related technologies, directed energy weapons, unmanned weapons, artificial intelligence (AI), and hypersonic technology, are hardly seen, at least in the top 25 programs. However, three of the top four are secret programs, and the possibility cannot be denied that such new technologies are included in these programs. Furthermore, the advanced innovative technologies program—ranked fifth in spending—is not a secret in and of itself, but its details are treated as a secret. According to budget request materials that are public, the program includes the Avatar project (approximately \$50 million) to turn existing manned fighters into unmanned fighters and use them as wingmen for manned fighters, and the ghost fleet project (approximately \$188 million) to carry out fleet activities with unmanned vessels. It is thus inferred

Table 6.1. Top 25 in R&D spending in the FY2019 defense budget proposal

	Organization	Program	FY2019 request (Unit: \$ Thousand)
1	Unknown	Classified Programs	16,722,251
2	Unknown	Classified Programs	4,070,029
3	Air Force	Long Range Strike – Bomber (B-21)	2,314,196
4	Unknown	Classified Programs	1,666,785
5	Office of the Secretary of Defense	Advanced Innovative Technologies	1,431,702
6	Air Force	Tech Transition Program	1,186,075
7	MDA	Ballistic Missile Defense Midcourse Defense Segment	926,359
8	Army	Assembled Chemical Weapons Alternatives	880,283
9	MDA	AEGIS BMD	767,539
10	Navy	Unmanned Carrier Aviation	718,942
11	Air Force	Test and Evaluation Support	692,784
12	Air Force	Presidential Aircraft Recapitalization (PAR)	673,032
13	Air Force	Evolved SBIRS	643,126
14	Air Force	Long Range Standoff Weapon	614,920
15	Air Force	F-22A Squadrons	603,553
16	MDA	Improved Homeland Defense Interceptors	561,220
17	Air Force	F-35 Squadrons	549,501
18	MDA	BMD Enabling Programs	540,926
19	MDA	Ballistic Missile Defense Targets	517,852
20	Navy	Ohio Replacement Program	514,846
21	Air Force	Global Positioning System III – Operational Control Segment	513,235
22	Air Force	Next Generation Air Dominance	503,997
23	MDA	Ballistic Missile Defense Command and Control, Battle Management	475,168
24	Navy	Next Generation Jammer (NGJ)	459,529
25	Navy	Defense Research Sciences	458,708

Source: Compiled by the author based on the US DoD website.

that the program incorporates many systems that utilize new technologies such as unmanned technologies. The section below provides an overview of US force projects for new technologies indicated in the FY2019 defense budget proposal, excluding secret programs like those discussed above.

3a. Space

Following the end of the Cold War, the United States was able to utilize space almost monopolistically for a long time. However, with China and Russia also beginning to make military uses of space, concerns arose that the use of space by US forces would be prevented by ASAT in future conflicts.¹³ Due to the rising importance of space for security as such, the FY2016 National Defense Authorization Act (FY2016NDAA) set the space capabilities program for security as one of the 12 major programs in the defense budget.¹⁴

Moreover, a large-scale organizational restructuring relating to space has been undertaken under the Trump administration.¹⁵ FY2019NDAA provided that a Space Command would be established to serve as a functional command in charge of space operations. On December 18, Vice President Pence delivered a speech at the Kennedy Space Center, which revealed that DoD was instructed to set up the Space Command as the 11th Combatant Command on par with the Indo-Pacific Command, the European Command, the Strategic Command, and the Special Operations Command. The speech also indicated that the administration intended to create a Space Force by the end of 2020 as a new military service on par with the army, navy, air force, and coast guard.¹⁶ Considering that the budget for US forces is requested by military departments, it will be necessary to establish a Space Force as a new military service to develop space capabilities efficiently, i.e., the Department of Space Force. These matters are, however, set forth by law and would be decided ultimately by Congress.

In terms of actual R&D, the Air Force will carry out applied research for strengthening payload and sensor technologies (approximately \$118 million), the advanced prototypes phase for sensors with improved capabilities to identify threats for space situational awareness (SSA) and for equipment to jam space systems of adversary countries (approximately \$92 million), the system development and demonstration phase for counter-space capabilities comprised of strengthening capabilities to counter communications jamming in space and planning for offensive space operations (approximately \$12 million), the

system development and demonstration phase for SBIRS (approximately \$61 million), and the system development and demonstration phase for evolved SBIRS (approximately \$643 million). In addition, MDA requested the system development and demonstration phase for STSS (approximately \$37 million). Based on at least public information, US R&D of space capabilities is still focused on strengthening sensor functions related to SSA, communications, and BMD, and nothing related to combat systems can be found.

3b. Hypersonic Technology

Interest in hypersonic technology has increased since the Conventional Prompt Global Strike (CPGS) concept was proposed in the latter half of the Bush administration. With China and Russia said to be developing this technology in recent years, it is a field of technology that is drawing attention. In the 2019 defense budget proposal, the Air Force's Technology Transition Program, ranked sixth in total R&D budget, includes the advanced prototyping phase for tactical boost glide system, while the amount is unknown. It suggests that steady progress is being made in R&D of hypersonic offensive systems stemming from CPGS. Other programs to be conducted include basic research on aerospace materials that can withstand hypersonic high temperature (approximately \$180 million) and applied research on the conceptual design of reusable hypersonic air vehicles and other related aspects (approximately \$24 million). Therefore, it is considered that hypersonic technology is still in the basic and applied research phases, except for the boost glide systems in the prototype phase.

3c. Directed Energy Technology

Research on directed energy weapons is conducted by the three military services, as well as MDA, which is pursuing an initiative to carry out boost phase intercept by mounting directed energy weapons onto UAVs. Whereas the Army and Air Force are in the applied research phase, the Navy has entered the advanced prototypes phase for directed energy weapons system mounted on surface vessels. This system consists of such technologies as: solid-state laser with an output of 60 kW or higher whose primary purposes are Anti-Surface Warfare, IAMD, and interference with an adversary's sensor for Intelligence, Surveillance and Reconnaissance (ISR); and railgun whose primary purposes

are surface fire support and IAMD. Approximately \$223 million was requested in the FY2019 budget proposal. MDA, which seeks to carry out boost phase intercept by mounting directed energy weapons onto HALE UAV, is currently in the advanced prototypes phase for the MQ-9 medium-to-high altitude UAV mounted with lasers not for intercept but for tracking. In this light, it should be assessed that research is still in the initial phase, except for the Navy's surface vessel system.

3d. AI

As regards AI in which interest has surged in recent years, MDA and the Air Force seek to utilize deep learning to strengthen their respective missile identification capabilities and synthetic aperture radars. Furthermore, the R&D institution Defense Advanced Research Projects Agency (DARPA) established the Artificial Intelligence Exploration program in July 2018.¹⁷ DARPA's key ongoing programs covered in its 2019 budget proposal include the Language Understanding and Symbiotic Automation program (approximately \$22 million), the Aircrew Labor In-cockpit Automation System (ALIAS) program to support pilots (approximately \$59 million), the Gremlins program for the research of ultra-small UAVs that can be launched into air in swarms and interfere with the opponent's activities (approximately \$31 million), and the Offensive Swarm-Enabled Tactics (OFFSET) program (approximately \$15 million).

Other notable DARPA programs from the perspective of military uses of AI include a project for strengthening capabilities to protect AI-enabled systems used by US forces from spoofing, taking into account that an adversary may utilize AI and abuse deep learning to attempt to elicit an erroneous response from AI-enabled systems of the United States (approximately \$9 million). In addition, the Explainable Artificial Intelligence (XAI) program addresses the significant black box problem of AI, especially of deep learning, namely, the logic by which AI arrives at a conclusion is not explainable to humans (approximately \$22 million). Furthermore, the Assured Autonomy program has commenced in preparation for future R&D on autonomous systems (approximately \$18 million). Current R&D carries out tests in non-learning system environments. Therefore, there lacks rigorous safety assurance for conducting tests of learning-enabled autonomous systems. In particular, because tests had previously been conducted in well-developed environments, the systems were unable to perform

learning necessary in real-life environments in the test phase. In order to allow for the testing of learning-enabled autonomous systems, the program will carry out research on testing environments for learning-enabled autonomous systems, including testing by modeling, system design, and simulation, and seek to ensure that the systems can operate safely even if they are used in uncertain environments.

As can be seen from the above, research on AI is currently centered around DARPA, and programs of each service are limited to strengthening sensor capabilities.

3. Mid-Term Elections and Domestic Outlook

(1) Mid-Term Elections and US Politics

In the 2016 US presidential election, attention was drawn to the remarks made by then presidential candidate Donald Trump. The winner of the election, President Trump, sought to translate a number of policies in his campaign promise into actions. In this process, policies that are executable under the authority of the executive branch were immediately implemented by the promulgation of a presidential decree, such as the withdrawal from the Trans-Pacific Partnership (TPP).¹⁸

For those policies that are under the authority of the judicial or legislative branches, a system of “checks and balances” based on separation of powers came into play. As a result, such policies could not be implemented at the sole discretion of the executive branch.

One of Trump’s key election promises was to repeal a national insurance scheme introduced during the Obama administration known as Obamacare. This needed the approval of the legislative body, i.e., Congress. However, it was difficult to reach a consensus. The Democratic party sought to continue Obamacare, and even within the Republican party, there was a mix of opinions. The party not only had radicals who sought the immediate repeal of Obamacare, but also moderates who wished to maintain certain elements of Obamacare, such as the ban on raising insurance premiums based on past health records, making a parent’s insurance coverage available for a child until reaching the age of 26, and maintaining supports provided by existing health insurance schemes at the state level.

On May 4, 2017, the House of Representatives passed the American Healthcare Act to repeal Obamacare by a vote of 217 to 213. However, it failed to pass at the Senate by a 49-51 vote. At this time, the Republicans had 52 Senate seats, while the Democrats had 49. The Republican Senators who voted against the Act were Susan Collins (Maine), Lisa Murkowski (Alaska), and John McCain (Arizona).

In this manner, the importance of Congress, as one of the three branches of government in a presidential system, in checks and balances has been reaffirmed in the Trump administration. The US Congress is a bicameral system comprised of the House of Representatives and the Senate. Members of the House serve two-year terms, such that all seats are reelected every two years. Members of the Senate serve six-year terms, with one-third of the seats reelected every two years. Therefore, congressional elections are held every two years in the United States. In a presidential election year, congressional elections are held at the same time as the presidential election. Congressional elections are also held in between presidential elections held every four years, or two years after a presidential election. These elections are known as mid-term elections and were held on November 6, 2018.

As a result of the 2016 congressional elections, the Republicans held 241 seats and the Democrats 194 seats in the House, while the Republicans held 52 seats and the Democrats 48 seats (including two seats held by independents who caucus with the Democrats) in the Senate. In a special election held to fill a vacancy due to the appointment of Senator Jeff Sessions (Alabama) as Attorney General, the Democrat Doug Jones won, bringing the number of seats held by the Republicans to 51 and the Democrats 49 as of the mid-term elections (following the death of Senator McCain on August 25, the Governor of Arizona named his replacement to fulfill McCain's term until 2020, and thus, an election will not be held to fill his vacancy).

As Table 6.2 shows, mid-term elections sometimes result in outcomes that are largely different from the presidential election held two years earlier and change the majority party in the House. In the 2006 mid-term elections following President Bush's reelection in the 2004 presidential election, the Democrats recaptured the majority in the House. In the 2010 mid-term elections following President Obama's election in 2008, the Republicans recaptured the majority. In the latest mid-term elections held two years after President Trump's election in 2016, the Democrats secured 235 seats in the House, more than the 199

Table 6.2. US Congress seats

	House of Representatives		Senate	
	Republican	Democrat	Republican	Democrat
2000	220	213	50	50
2002	229	205	51	49
2004	233	201	55	45
2006	202	233	49	51
2008	178	257	41	57
2010	242	193	47	53
2012	234	201	45	55
2014	247	188	44	56
2016	241	194	52	48

Source: Compiled by the author based on the US Congress website.

Republican seats, and became the majority party.

In the Senate, on the other hand, the Republicans secured 53 seats and the Democrats 47 seats (including two seats held by independents who caucus with the Democrats), with the Republicans gaining one seat. The Senators up for reelection were last elected in 2012. In those elections, of the 33 seats up for reelection, the Democrats lost Nebraska but won Indiana and Massachusetts previously held by Republicans, as well as Connecticut previously held by Joseph Lieberman, an independent who caucused with the Democrats and retired. In total, the Democrats secured 23 seats, up two seats from the 21 before the elections. In other words, the Democrats were up for reelection following a large win in the previous elections, making it difficult to gain more seats in 2018. The elections in fact were close in states where the Democrats won in 2012, especially North Dakota, Florida, Indiana, Missouri, and Montana. The Democrats lost in four of them—all but Montana.

Shortly before the congressional members elected in the mid-term elections were to start their terms in January 2019, a political row unfolded over the budget and led to a shutdown of some federal government departments. Despite the fiscal year of the US government beginning on October 1, the FY2019 appropriations bills passed before the mid-term elections covered only the Departments of Defense, Education, Veterans Affairs, and Energy. As the appropriations bills for the Departments of Homeland Security, Commerce, State, Justice, Housing,

Agriculture, and Interior could not be passed before the mid-term elections, a continuing resolution was passed with bipartisan agreement that would fund these departments until December 7. Therefore, FY2019 appropriations bills needed to be passed by December 7. The expiration date of the continuing resolution was then extended to December 21 due to events such as the funeral of former President George H.W. Bush. Usually, US appropriations bills are deliberated by each policy area as separate laws, as with the National Defense Authorization Act and the Defense Appropriations Act. However, appropriations bills that were yet to be passed were combined into an omnibus bill to be deliberated together, and adjustments were made in Congress.

For the budget of the Department of Homeland Security, President Trump strongly requested inclusion of a budget of over \$5 billion to build a wall along the border with Mexico. The Democrats strongly opposed. The Democrats and the Republicans coordinated but failed to reach an agreement, with the Democrats refusing the Republican proposal to decrease the budget for border protection to \$1.6 billion. As a second best measure, the two parties agreed to pass a continuing resolution that extends funding until February 8 and to discuss the US-Mexico border wall in the new Congress of 2019. However, President Trump vehemently opposed compromises that did not include a relevant budget for the Mexican border wall. Passing a continuing resolution requires not only the approval of Congress but also the President's signature. Ultimately, President Trump refused to sign, causing a shutdown of the federal government departments for which FY2019 budgets had not been passed.¹⁹

These series of political events were not only confrontations between the Republican and Democratic parties in Congress; they also took the form of President Trump, as head of the executive branch, refusing a compromise that had passed in Congress. This was the second federal government shutdown for the Trump administration, as the federal government was also shut down from January 20 to 22, 2018 over the handling of illegal immigrants under the age of 16. These developments demonstrate escalating political feuds over especially the issue of illegal immigrants, led by President Trump. The 2018 mid-term elections have resulted in split control of US Congress, with the Republican party having a majority in the Senate and the Democratic party having a majority in the House. In this light, it is highly likely that the political process for legislation and budgets will take on an even greater confrontational tendency.

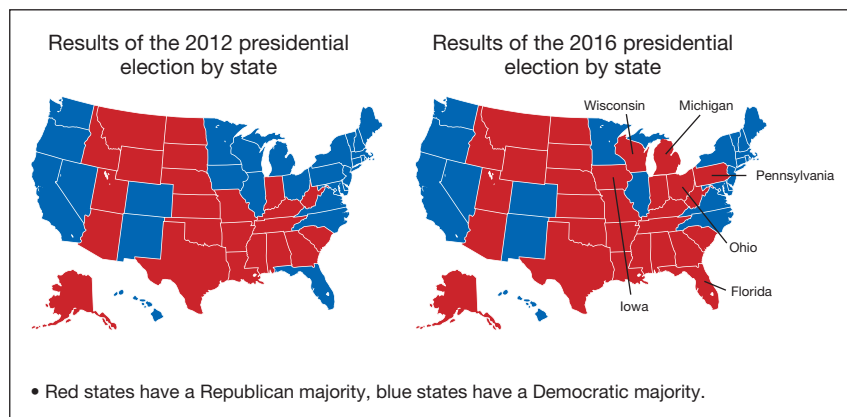
In regard to the shutdown's impacts on security, when the federal government shut down in 2013 stemming from a confrontation over Obamacare, which led to the Republican-controlled Congress to reject raising the federal debt ceiling, DoD was affected and the federal budget including defense spending was later subject to sequestration. In the latest federal government shutdown, DoD was not affected, and unlike 2013, expenditure increases were not part of the political dispute. It is thus considered that the shutdown has hardly any impacts on security.

Large-scale federal government shutdowns, as in the 2013 and 1995-1996 (Clinton administration) examples, have tended to occur because a Democratic administration tries to raise spending centered around social security, and a Republican-controlled Congress, which seeks to slim down the federal budget, responds by rejecting the debt ceiling increase. This pattern does not apply to the current Democrat-controlled House under a Republican administration. Nevertheless, should the interparty confrontation further intensify and the entire federal budget becomes subject to political bargaining, a federal government shutdown as large as that in 2013 could occur if a compromise is not reached. In such a case, security may be significantly affected, similar to 2013. US politics is tested by whether or not such a situation could be avoided.

(2) Comparison of 2018 Mid-Term Elections and 2016 Presidential Election

Keywords in US politics include red state, blue state, and swing state. Red states are states with an extremely strong tendency to support the Republican party, such as Texas and Georgia. Blue states are states with an extremely strong tendency to support the Democratic party, such as New York and California. Swing states refer to states whose support swings between political parties and include Pennsylvania, Ohio, and Florida. Another trend observed in recent years is that, in either of the cases, the Democrats have strong support in urban areas, whereas the Republicans

Figure 6.1. Comparison of the 2012 and 2016 presidential elections



Source: Compiled by the author based on Politico's website.

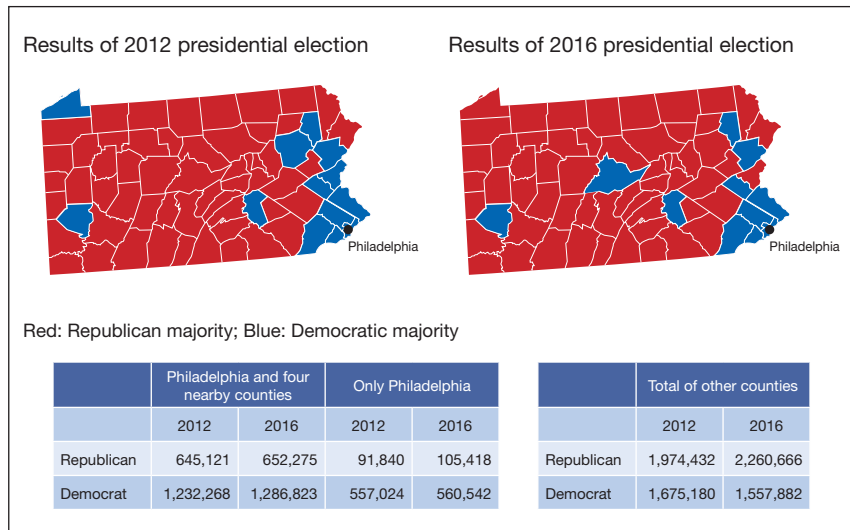
have strong support in suburbs.

In a presidential election, a basic strategy is to win as many swing states as possible. In the 2016 election, the Republicans won in six states where the Democrats won in President Obama's reelection in 2012, namely, Iowa, Wisconsin, Ohio, Pennsylvania, Florida, and Michigan.

As Trump earned 306 electoral votes to Hillary Clinton's 232 votes, it could be said that Pennsylvania (20 electoral votes) and Florida (29 electoral votes) had a direct influence on the outcome. A detailed examination of the election results in these two states shows a clear tendency for the Democrats to have strong support in urban areas and for the Republicans to have strong support in suburbs.

In Pennsylvania, the Democrats had 2,907,448 votes and the Republicans 2,619,553 in 2012, while in 2016, the Republicans had 2,912,941 votes, exceeding the Democrats' 2,844,705 votes. As Figure 6.2 also reveals, a striking characteristic of Pennsylvania is that its Democratic votes are concentrated in the state's greatest metropolis, Philadelphia, and its surrounding area. In Philadelphia and four nearby counties within its commuting distance, the Democrats won 1,232,268 votes in 2012, whereas the Republicans won roughly half that number, or 645,121 votes. In 2016, the Democrats won 1,286,823 votes, the Republicans just 652,275. The difference is even more stark when the area is limited to Philadelphia. In 2012, the Democrats won 557,024 votes, whereas the Republicans not even one-fifth that number, or

Figure 6.2. Number of votes cast in the 2012 and 2016 presidential elections in Pennsylvania

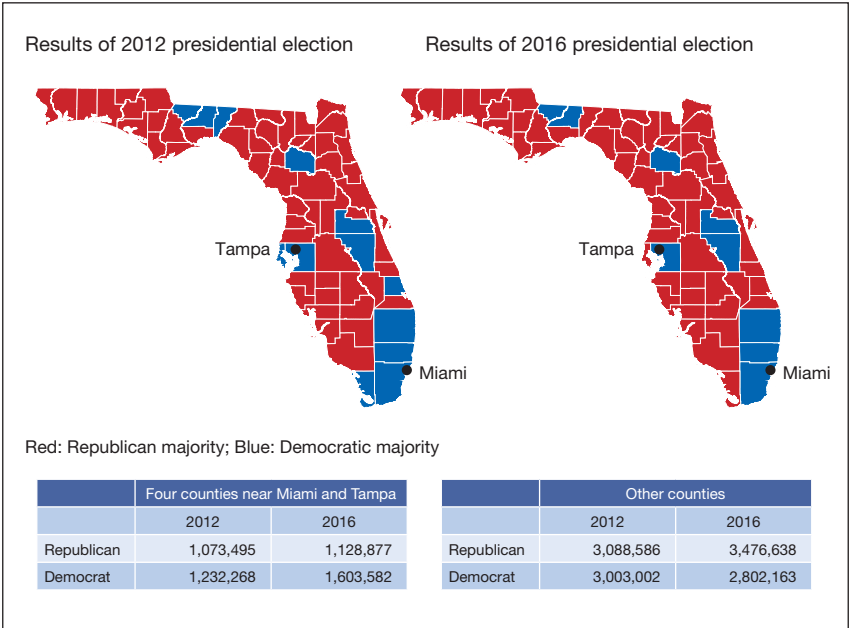


Source: Compiled by the author based on Politico's website.

91,840. In 2016, compared to the 560,542 votes won by the Democrats, the Republicans won no more than one-fifth that number, or 105,418. The situation is entirely different in the suburbs. In all the counties excluding Philadelphia and its vicinity, even when Pittsburgh is included where the Democrats made gains from 348,151 votes in 2012 to 363,013 votes in 2016, the Democrats won 1,675,180 votes and the Republicans 1,974,432 votes in 2012. In 2016, the number of Democratic votes decreased to 1,557,882, while the Republicans made significant gains, capturing 2,260,666 votes.

A similar trend is also found in Florida. As Figure 6.3 illustrates, in urban areas in and around Miami and Tampa, the Democrats won 1,232,268 votes in 2012 and had an advantage over the Republicans which had 1,073,495 votes. In 2016, the difference became even larger, with the Democrats capturing 1,603,582 votes and the Republicans 1,128,877 votes. In other areas, however, whereas the Democrats had 3,003,002 votes and the Republicans 3,088,586 votes in 2012, in 2016, the number of Democratic votes fell to 2,802,163 while the number of Republican votes increased sharply to 3,476,638, overcoming its inferiority in urban areas.

Figure 6.3. Number of votes cast in the 2012 and 2016 presidential elections in Florida



Source: Compiled by the author based on Politico’s website.

These results suggest that, in the 2016 presidential election, the Republican election strategy to get votes in the suburbs succeeded. For the Democrats, collecting votes in non-urban areas will be a challenge in the lead-up to the 2020 presidential election. In the 2018 mid-term elections, some assess that the Democrats’ seizure of House seats from the Republicans in a number of suburban constituencies contributed to the party’s recapture of a majority.²⁰ However, it is too early to judge this as any kind of sign about the next presidential election. With two years still left until the final stage of the presidential election, the situation could largely change depending on which candidates Democrats select for the 2020 primaries. One thing is for sure: a key point will be whether candidates can be fielded who can win votes in the suburbs of swing states.

Column

Arrival of the Post-INF Treaty Era

On February 1, 2019, the United States notified Russia of its decision to revoke the INF Treaty. The INF Treaty, formally known as the "Treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles," was established in 1987 at the end of the Cold War between the United States and then Soviet Union (with the dissolution of the Soviet Union, Russia assumed the obligations under the treaty). As the absence of the words "nuclear weapons" from the treaty's official name suggests, the treaty commonly known as the "INF Treaty" covers only missile delivery systems.

The INF Treaty bans possession of ground-launched ballistic and cruise missiles with ranges of 500-5,500 km. The United States has disclosed since 2014 that Russia is developing the ground-launched cruise missile SSC-8 (NATO code; Russian name 9M729) with a range prohibited under the treaty. First, in May 2013, Tom Donilon, National Security Advisor, and William Burns, Deputy Secretary of State, notified Nikolai Patrushev, Secretary of the Security Council of Russia, that the United States suspects Russia of violating the treaty. Subsequently, the United States and Russia discussed this issue on more than 30 occasions (according to the US Department of State website). In the course of those discussions, Russia never admitted to breaching the treaty. In response, US protests intensified. On October 20, 2018, President Trump stated in an address delivered in Nevada that the United States may exit the INF Treaty. The US-Russia consultations that followed failed to make any progress, and on February 1, the United States notified its withdrawal.

Some in Russia are said to have the view that the INF Treaty concluded during the Cold War is incompatible with the post-Cold War international environment. The reason: whereas countries south of Russia, namely, Iraq (until the Iraq War), Iran, Pakistan, India, China, and North Korea, deployed intermediate-range ballistic missiles with ranges covering Russia, Russia under the INF Treaty's restrictions could not deploy missiles with equivalent ranges to counter them. There was a debate even within the United States that the INF Treaty's restrictions should be abolished in order to counter the conventional warhead ballistic missiles developed by China. In this regard, some in the United States were sympathetic towards Russia. It is thought that the United States began to take a rigorous stance towards Russia's non-compliance with the INF Treaty upon analyzing that Russia had secretly developed missiles in violation of the treaty, and in view of the decisively worsening US-Russia relations due to Russia's annexation of Crimea in 2014.

The INF Treaty was established as the Cold War drew to a close and is one of the several interrelated arms control and disarmament treaties. Specifically, strategic nuclear arms control treaties like the New Strategic Arms Reduction Treaty (New START Treaty), which covered strategic nuclear weapons with ranges of over 5,500 km, were based on the assumption that missiles with ranges of 500-5,500 km are banned under the INF Treaty. Furthermore, treaties

related to controlling conventional arsenals such as the Treaty on Conventional Armed Forces in Europe (CFE) have been combined with the INF Treaty to help form a military balance in post-Cold War Europe. In short, revocation of the INF Treaty is highly likely to affect other treaties that are strategically linked to the INF Treaty. For example, without the premise that missiles with ranges of 5,500 km or less do not exist, the successor treaty to the New START Treaty may become an arms control treaty that extends beyond limiting the total number of deployed warheads to the current 1,550. In this manner, the revocation of the INF Treaty has impacts on all the arms control treaties comprising the basic security framework of the post-Cold War era, and could possibly mean the commencement of a “post-INF Treaty era.”

In this sense, the revocation of the INF Treaty may have significance for international security as a whole, not limited to merely an elimination of a single treaty. Japan, too, needs to discuss how to adapt to a post-INF Treaty era, with the recognition that such major changes could occur. Key discussion points in particular include the following: (1) how should the reality be addressed that China and North Korea have already deployed and the ROK is developing intermediate-range missiles, (2) in particular, how will the Japan-US alliance counter high precision intermediate-range ballistic and cruise missiles deployed by China, (3) how will diplomatic agreements be established, including regulations on intermediate-range missiles that replace the INF Treaty, such as the multilateralization of the INF Treaty to incorporate China, and (4) how to approach future air warfare in light of stealth technology and unmanned technologies.

NOTES

- 1) The White House, “Remarks by Vice President Pence on the Administration’s Policy toward China,” October 4, 2018.
- 2) Bob Woodward, *Fear: Trump in the White House*, Simon & Schuster, 2018, p. 136.
- 3) The White House, “Statement from the Press Secretary Regarding the President’s Working Dinner with China,” December 1, 2018.
- 4) White House Office of Trade and Manufacturing Policy, *How China’s Economic Aggression Threatens the Technologies and Intellectual Property of the United States and the World*, June 2018.
- 5) H.R.5515 - John S. McCain National Defense Authorization Act for Fiscal Year 2019, August 13, 2018.
- 6) Public Law 115-135, Taiwan Travel Act.
- 7) Author’s interview with an expert in the United States, August 2018.
- 8) US Air Force, “Fact Sheet: LGM-30G Minuteman III,” September 30, 2015.
- 9) US Navy, “Fact File: Trident II (D5) Missile,” May 11, 2017.
- 10) Lieutenant General Samuel Greaves, Director, Missile Defense Agency, Fiscal Year 2019 Budget Request for Missile Defense and Missile Defeat Programs, Hearing of House Armed

- Services Committee, Strategic Capability Subcommittee, April 17, 2018.
- 11) Mark Gunzinger and Bryan Clark, "America Needs an Air and Missile Defense Revolution," *The National Interest*, May 17, 2016.
 - 12) Michael D. Griffin, Under Secretary of Defense for Research and Engineering, Promoting DoD's Culture of Innovation, Hearing of House Armed Services Committee, April 17, 2018.
 - 13) Elbridge Colby, "From Sanctuary to Battlefield: A Framework for a US Defense and Deterrence Strategy for Space," Center of New American Security, January 27, 2016.
 - 14) Public Law 114-92, National Defense Authorization Act for Fiscal Year 2016.
 - 15) The White House, "President Donald J. Trump is Building the United States Space Force for a 21st Century Military," August 9, 2018.
 - 16) The White House, "Remarks by Vice President Pence at Kennedy Space Center," December 18, 2018.
 - 17) Defense Advanced Research Projects Agency, "Accelerating the Exploration of Promising Artificial Intelligence Concepts: New Effort Will Expedite Pioneering AI Research, Rapidly Moving from Idea to Award," July 20, 2018.
 - 18) The White House, "Presidential Memorandum Regarding Withdrawal of the United States from the Trans-Pacific Partnership Negotiations and Agreement," January 23, 2018.
 - 19) *The Washington Post*, December 3, December 19, and December 23, 2018.
 - 20) *The Washington Post*, November 6, 2018.

Chapter 6 author: Sugio Takahashi

